

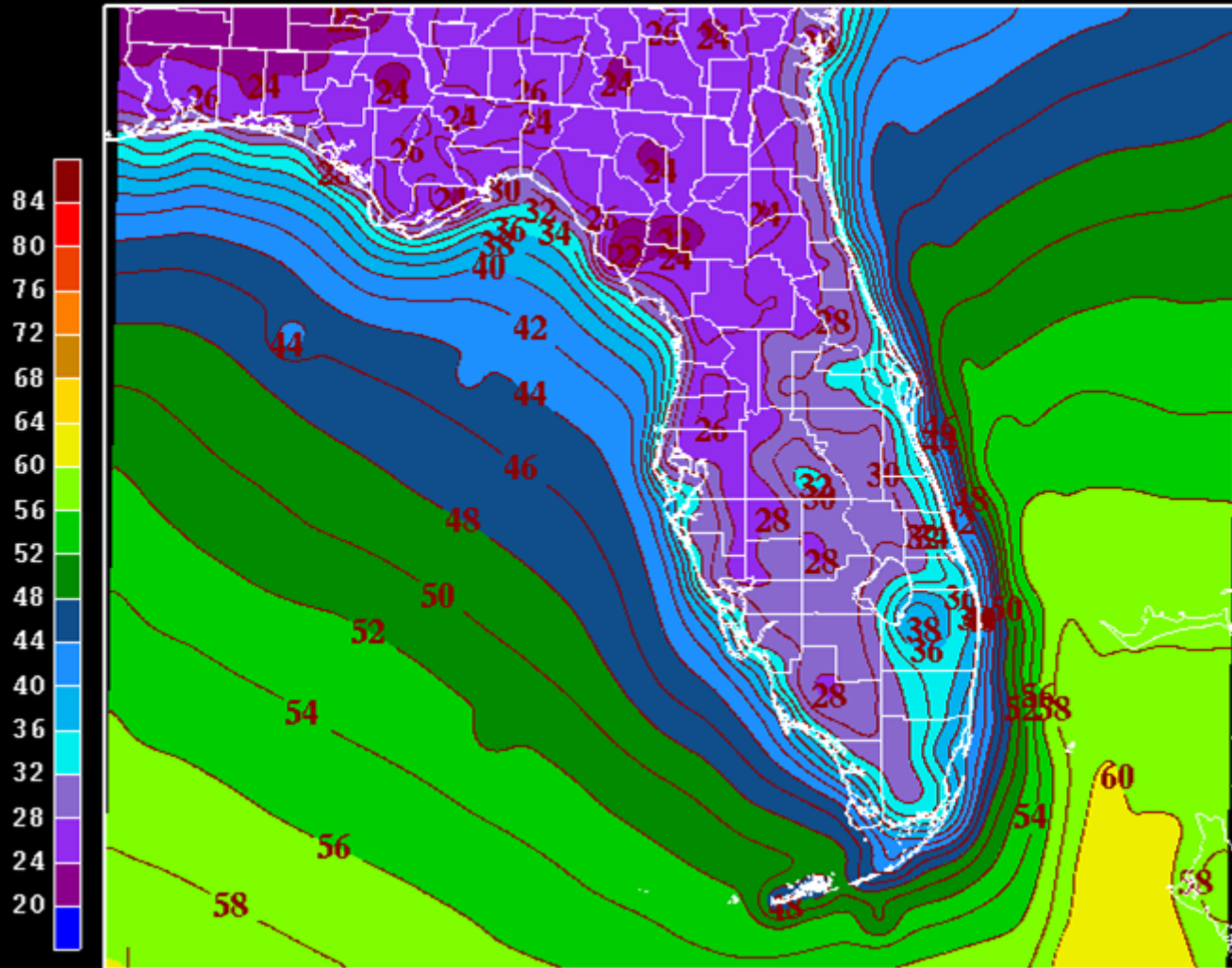
Water Conditions Summary

*Governing Board Meeting
January 8, 2008*

*Susan Sylvester, Director
Operations Control Department*

3 Jan 2008 7am Temperatures

10-m Temperatures (F) at 080103/1200f000



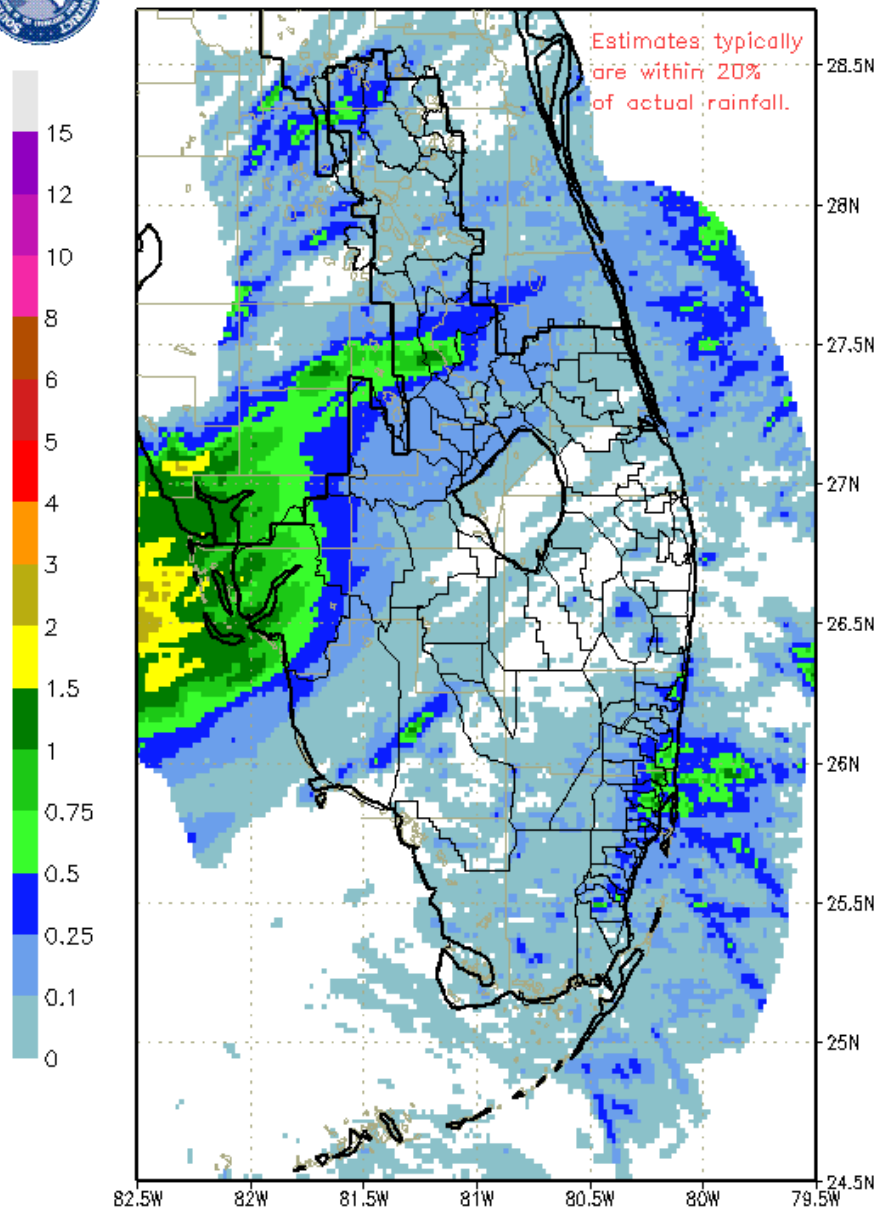
NWS Melbourne: <http://www.srh.noaa.gov/mlb>



SFWMD RAINDAR 7-DAY RAINFALL ESTIMATES

FROM: 0745 EST, 12/31/2007

THROUGH: 0745 EST, 01/07/2008

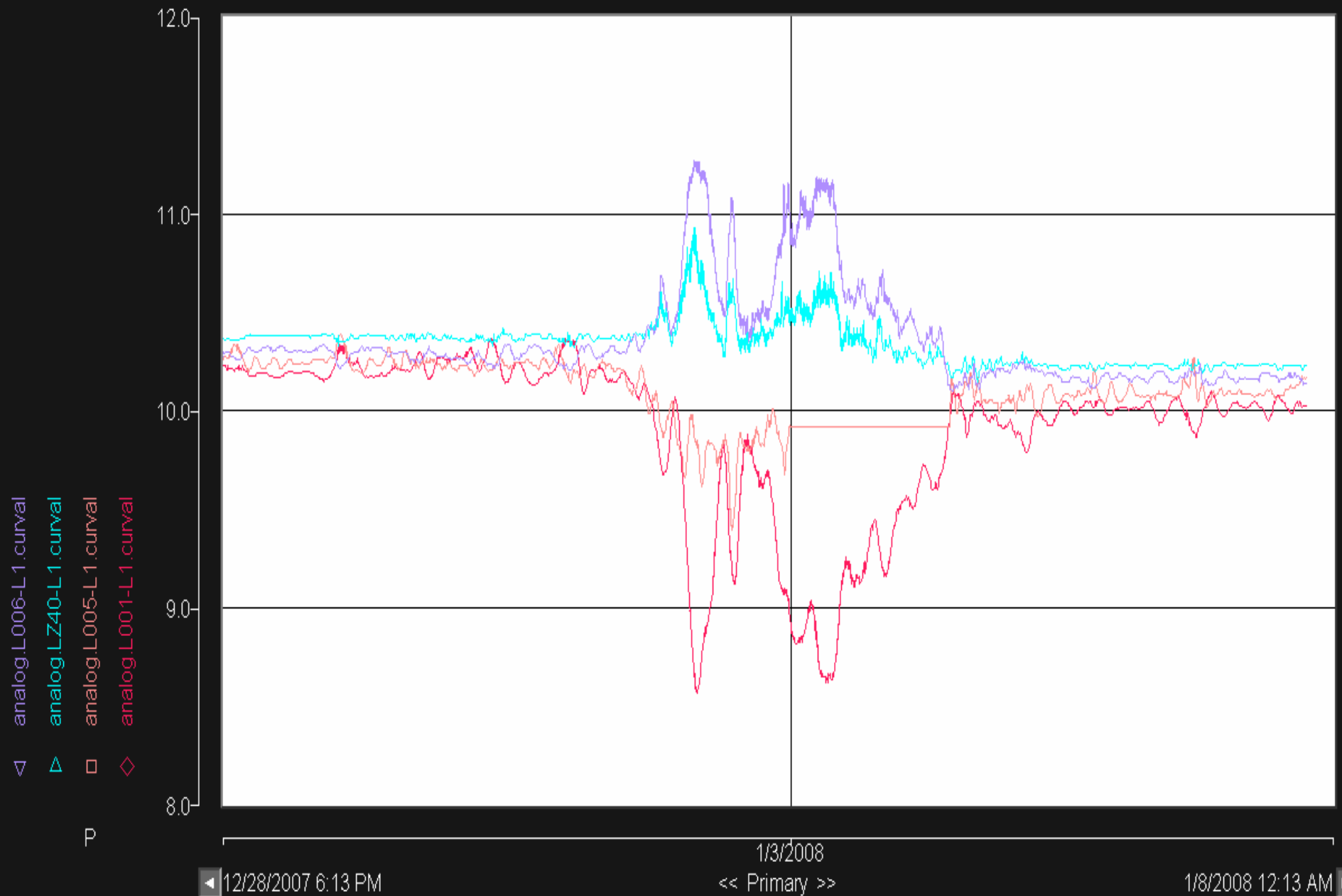


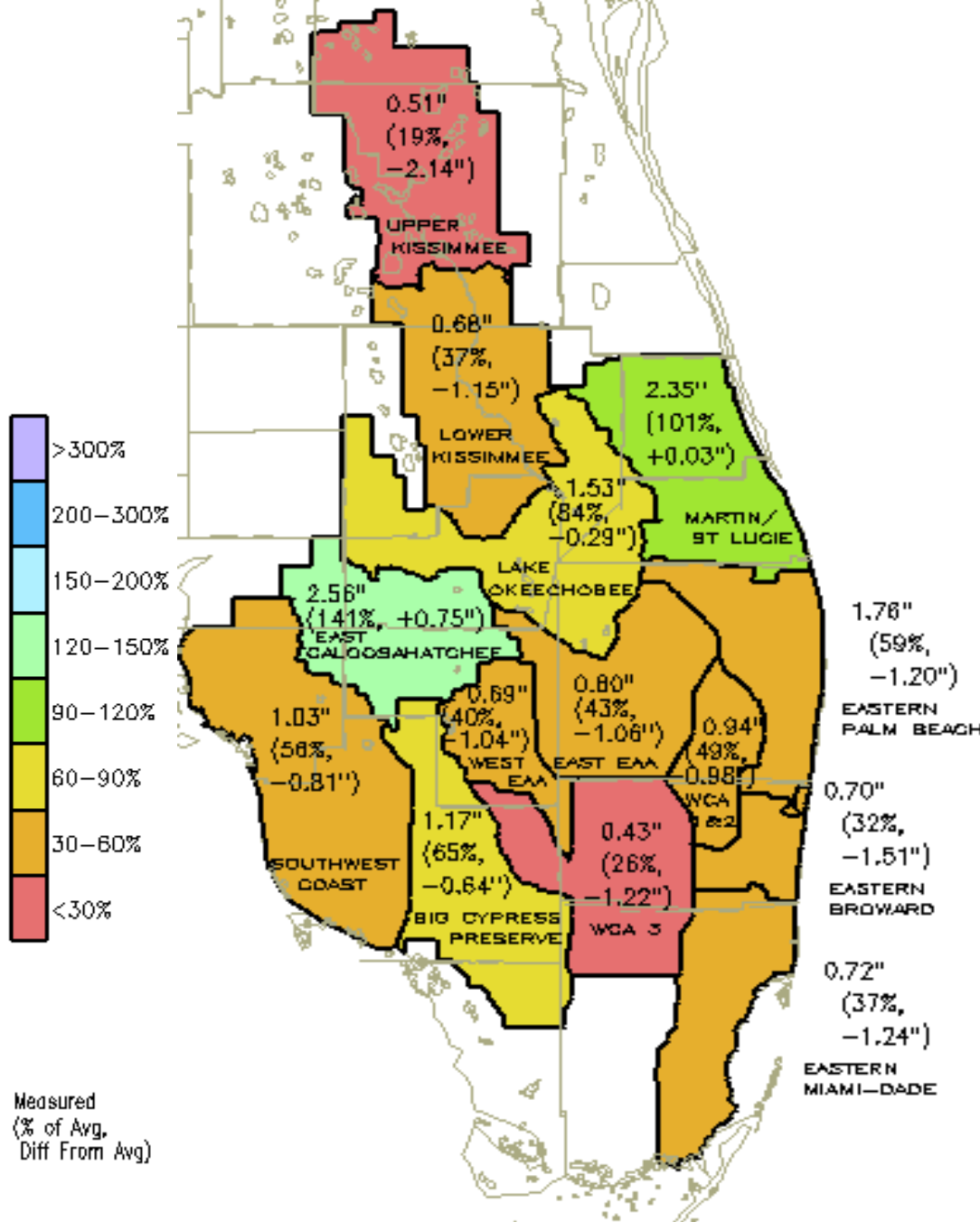
DISTRICT-WIDE RAINFALL ESTIMATE: 0.136"

GRADS: COLA/IGES

2008-01-07-08:23

Lake Okeechobee





SFWMD 2007 December Rainfall

Dec 2nd – Jan 1st

DISTRICT-WIDE:
1.14" (57%, -0.87")

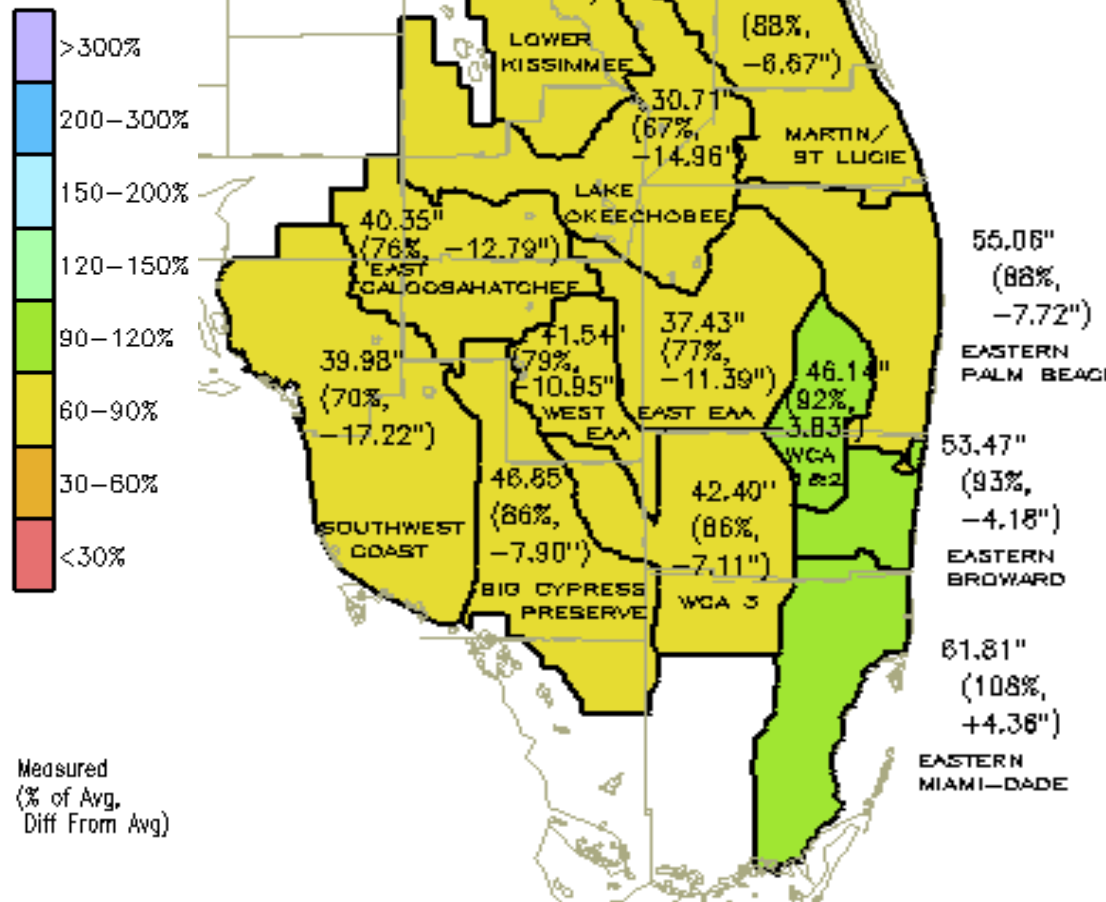
Average December
= 2.01"

- *Below-average December rainfall in all basins except E.Caloosahatchee & Martin/St. Lucie*
- *Nov & Dec 2007 total was 36% of average (1.7" vs 4.7")*
- *Poor start for the 2007-2008 Dry Season (already 3" below average)*

SFWMD 2007 Annual Rainfall 02-Jan-07 to 01-Jan-08

DISTRICT-WIDE:
42.9" (82%, -9.1")

**Average Annual
= 52.0"**



- *Kissimmee Basins*
~7"-11" < average
- *Lake O. & Southwest Coast*
13"-17" < average
- *EAA* ~11" < average
- *Eastern Miami-Dade Co.*
4" > average
- 9th driest year since 1932
- 2006-2007 set a new record-low 2 calendar-yr total (83.6")
(1955-56: 84.6")

U.S. Drought Monitor

Southeast

January 1, 2008

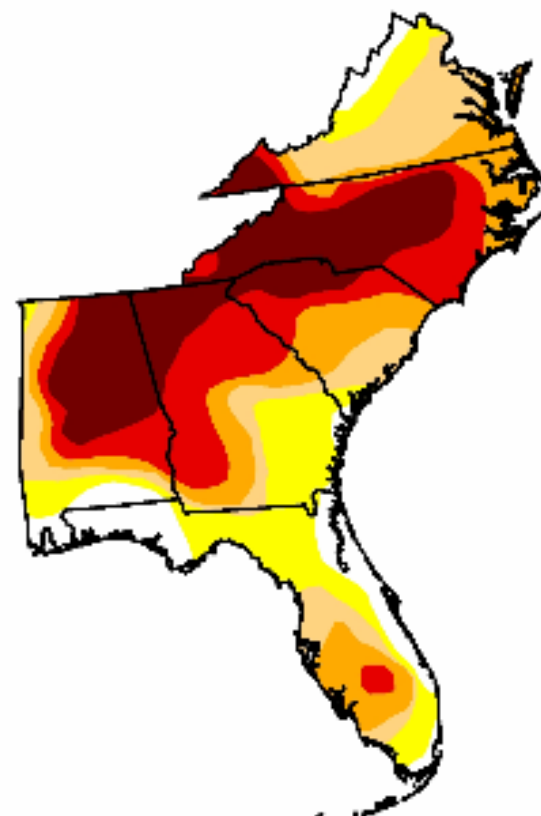
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.6	90.4	74.3	58.5	41.0	22.0
Last Week (12/25/2007 map)	9.0	91.0	76.9	62.3	47.8	36.2
3 Months Ago (10/09/2007 map)	12.8	87.2	79.7	68.2	47.7	26.0
Start of Calendar Year (01/01/2008 map)	9.6	90.4	74.3	58.5	41.0	22.0
Start of Water Year (10/02/2007 map)	10.1	89.9	77.9	63.8	45.2	24.0
One Year Ago (01/02/2007 map)	52.2	47.8	10.2	1.5	0.0	0.0

Intensity:

 D0 Abnormally Dry	 D3 Drought - Extreme
 D1 Drought - Moderate	 D4 Drought - Exceptional
 D2 Drought - Severe	



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



Released Thursday, January 3, 2008

Author: Richard Heim, NOAA/NESDIS/NCDC

<http://www.drought.unl.edu/dm/monitor.html>

sfwmd.gov

U.S. Drought Monitor

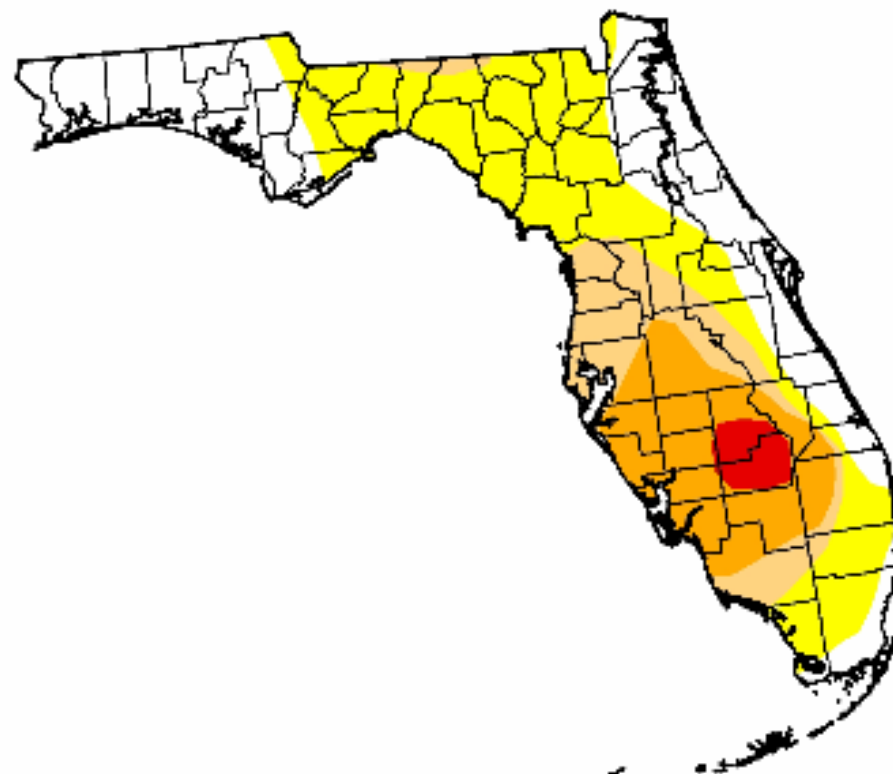
Florida

January 1, 2008

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.8	68.2	33.1	19.7	2.6	0.0
Last Week (12/25/2007 map)	30.9	69.1	33.3	19.7	2.6	0.0
3 Months Ago (10/09/2007 map)	33.1	66.9	44.2	24.7	9.1	0.0
Start of Calendar Year (01/01/2008 map)	31.8	68.2	33.1	19.7	2.6	0.0
Start of Water Year (10/02/2007 map)	20.8	79.2	44.2	22.0	9.1	0.0
One Year Ago (01/02/2007 map)	1.2	98.8	47.8	7.4	0.0	0.0



Intensity:

 D0 Abnormally Dry	 D3 Drought - Extreme
 D1 Drought - Moderate	 D4 Drought - Exceptional
 D2 Drought - Severe	

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. See accompanying text summary
for forecast statements

<http://drought.unl.edu/dm>



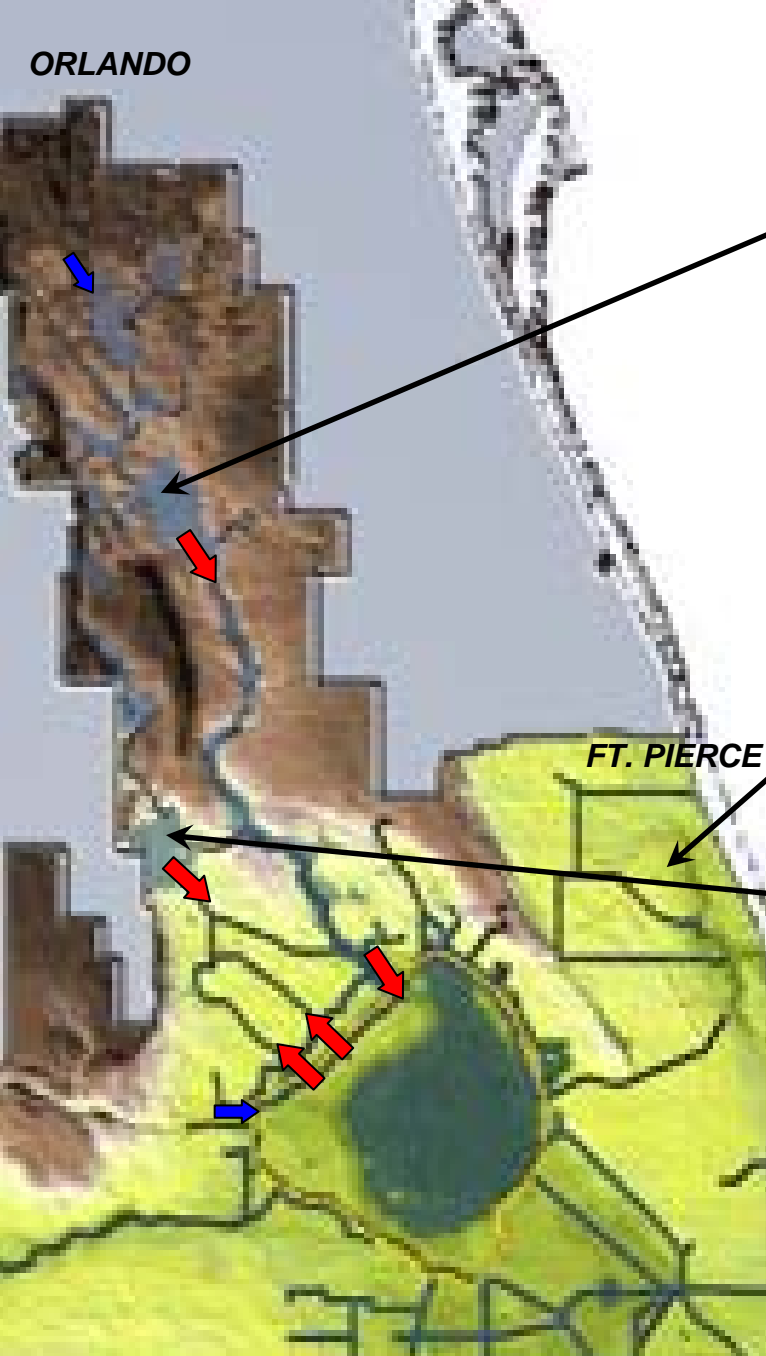
Released Thursday, January 3, 2008

Author: Richard Heim, NOAA/NESDIS/NCDC

<http://www.drought.unl.edu/dm/monitor.html>

sfwmd.gov

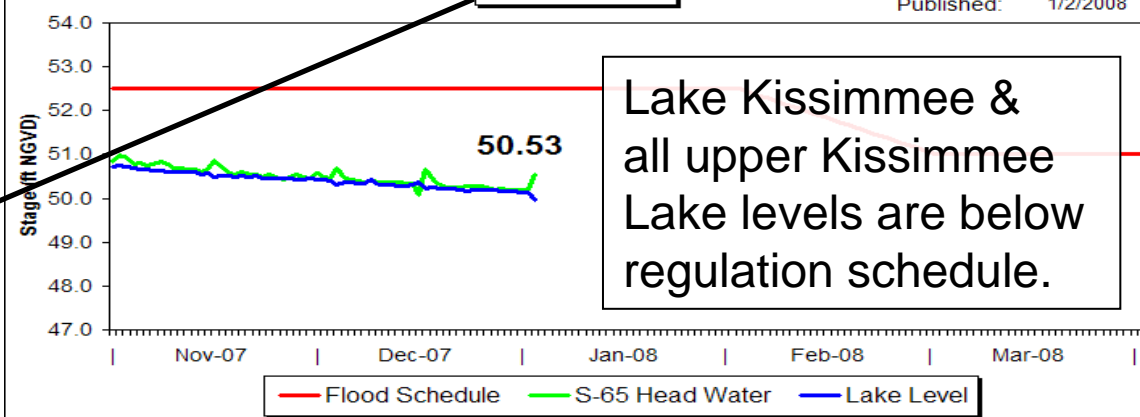
ORLANDO



FT. PIERCE

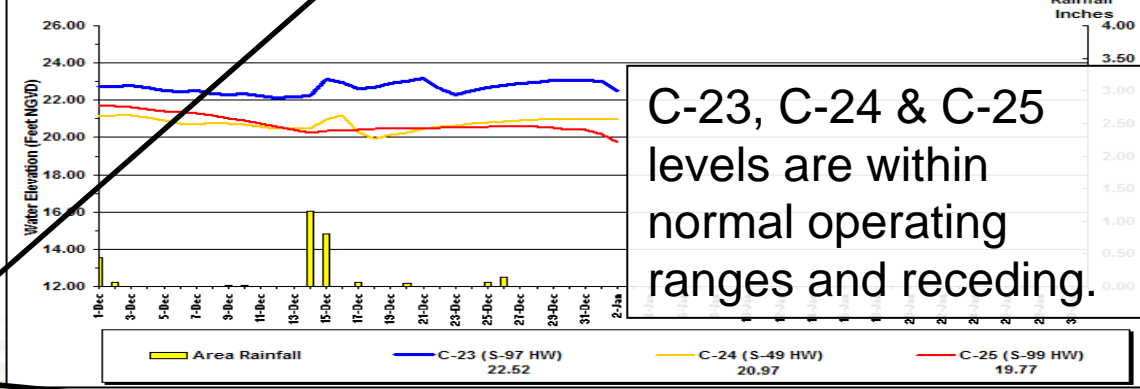
Lake Kissimmee

Published: 1/2/2008



Lake Kissimmee & all upper Kissimmee Lake levels are below regulation schedule.

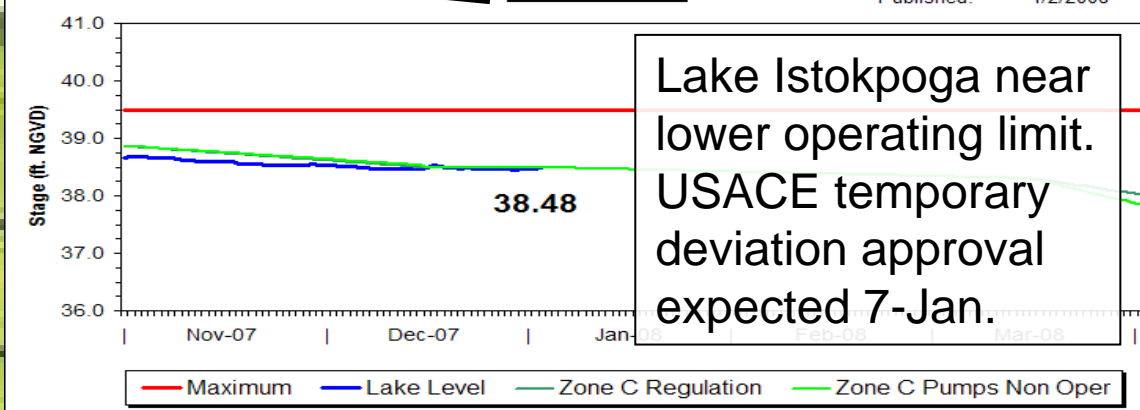
St Lucie Structures on C23, C24 & C25 Canals
Published: 01/02/08



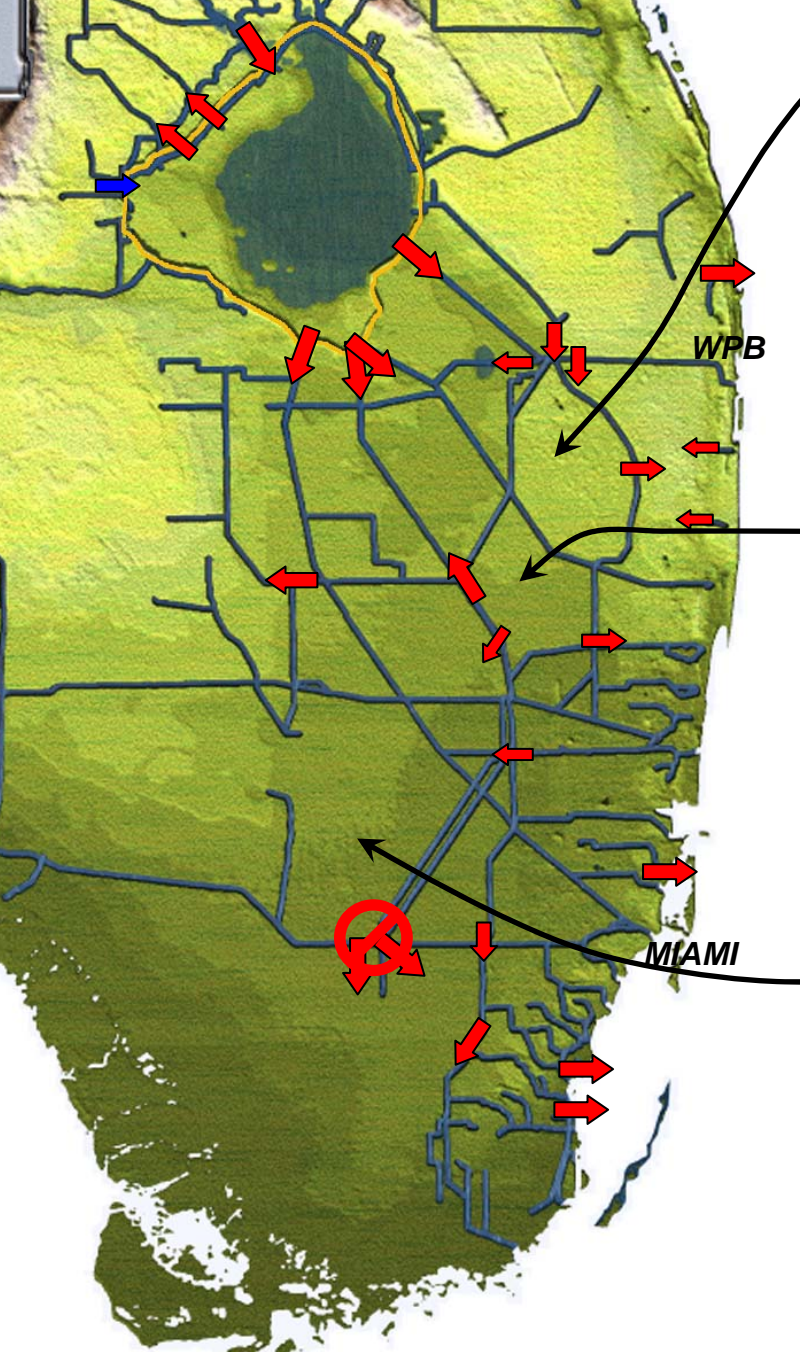
C-23, C-24 & C-25 levels are within normal operating ranges and receding.

Lake Istokpoga

Published: 1/2/2008

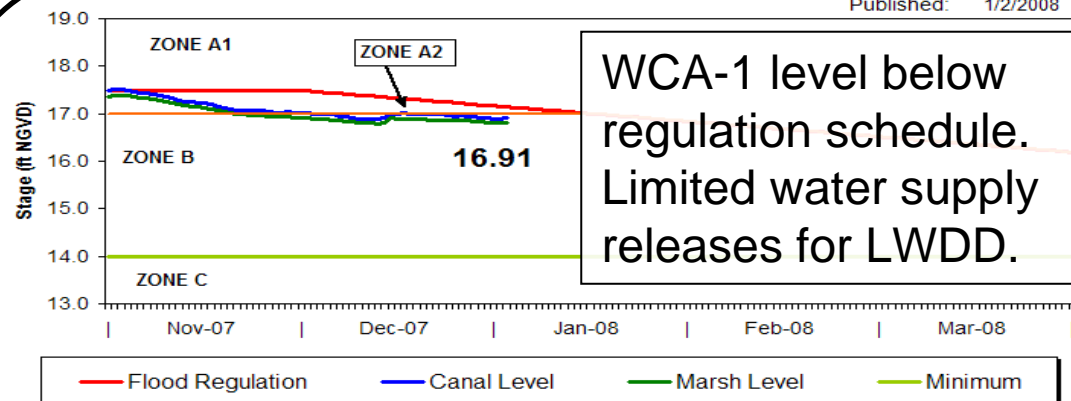


Lake Istokpoga near lower operating limit. USACE temporary deviation approval expected 7-Jan.



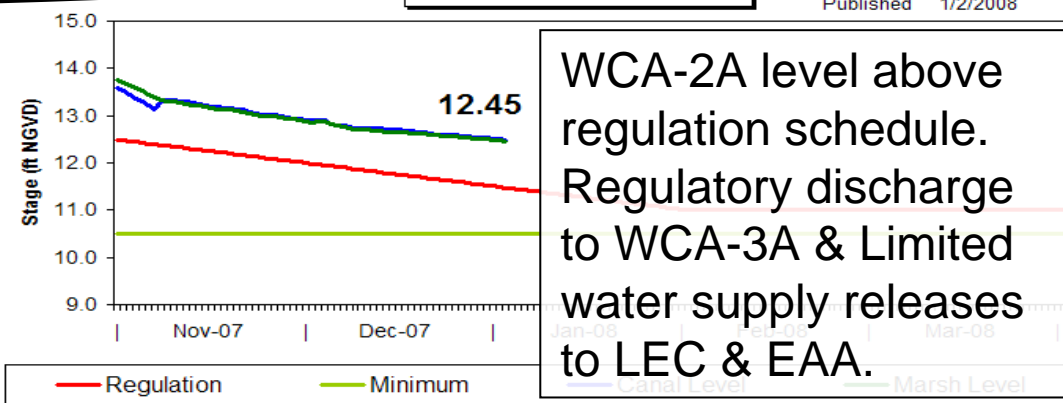
Water Conservation Area 1

Published: 1/2/2008



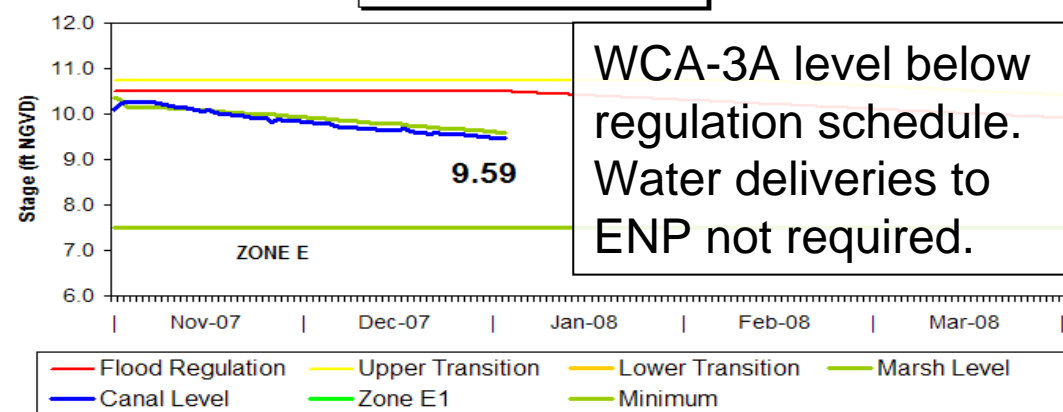
Water Conservation Area 2A

Published 1/2/2008



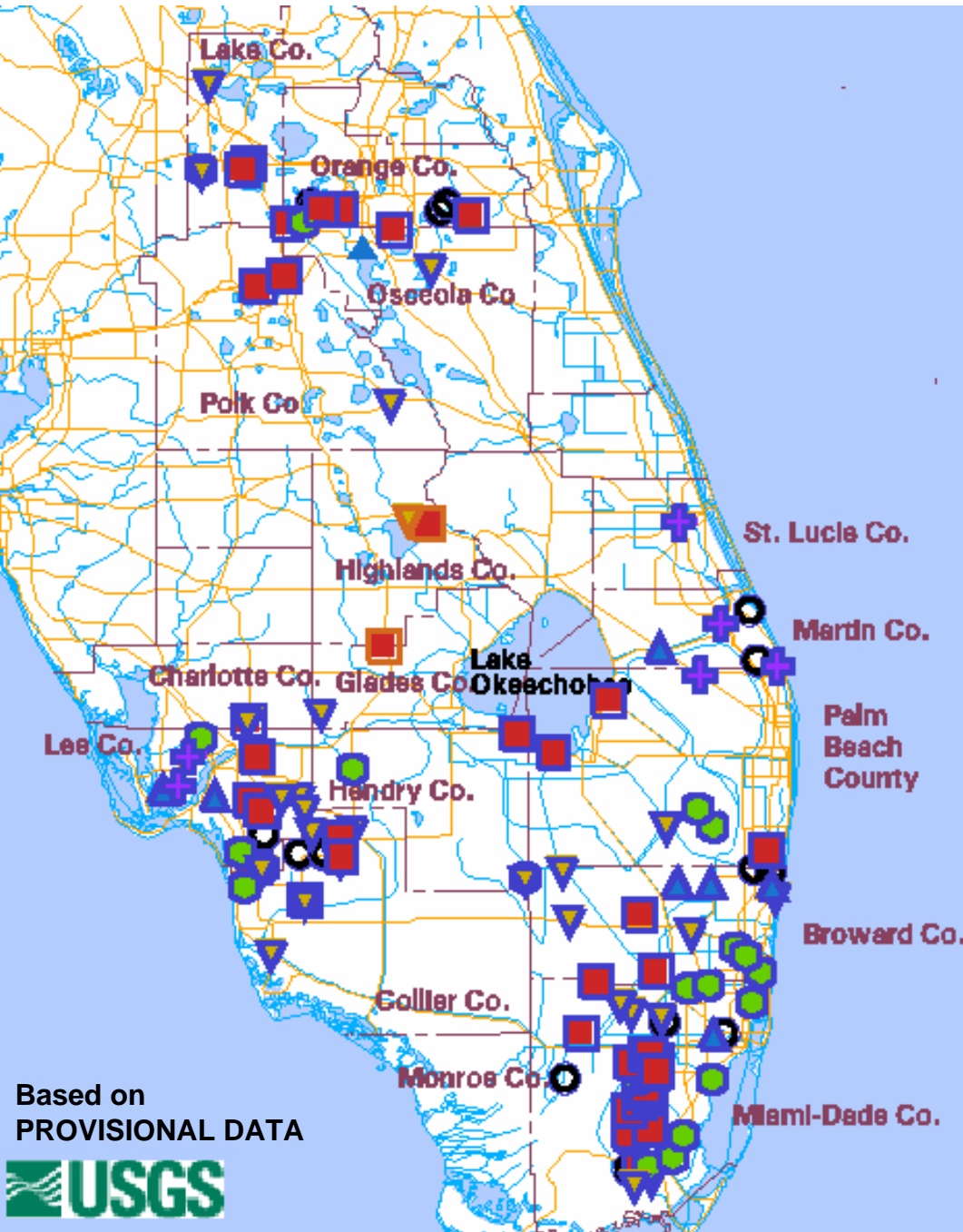
Water Conservation Area 3A

Published: 1/2/2008









WATER LEVELS AT SELECTED MONITORING SITES

as of January 7, 2008

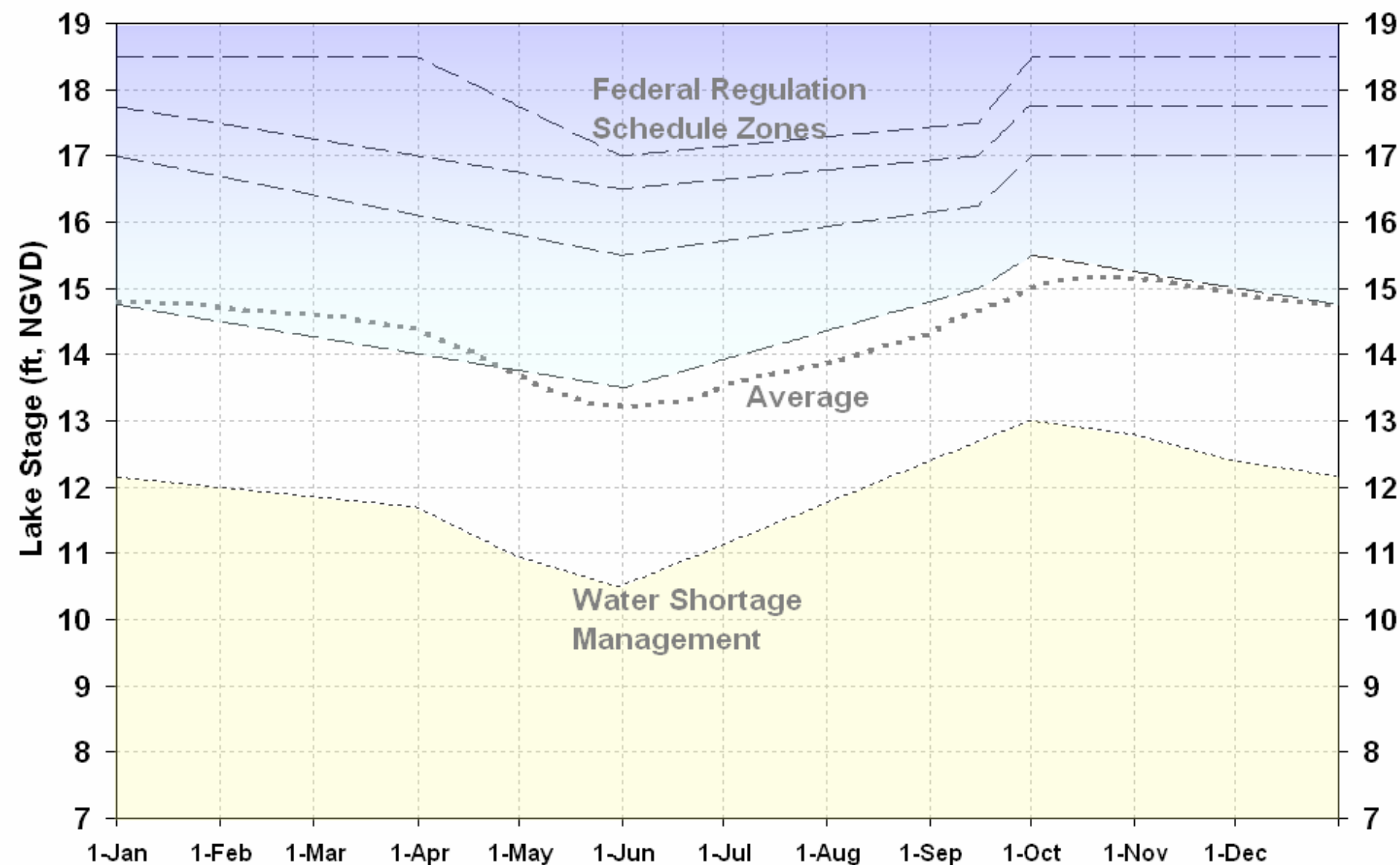


CLASS BASED ON PAST WATER
ELEVATIONS FOR THIS TIME OF YR

-  In highest 10%
-  Within highest 10-30%
-  Within 20% of the median
-  Within lowest 10-30%
-  In lowest 10%
-  Insufficient information

Lake Okeechobee Historical Stage Hydrograph Comparison

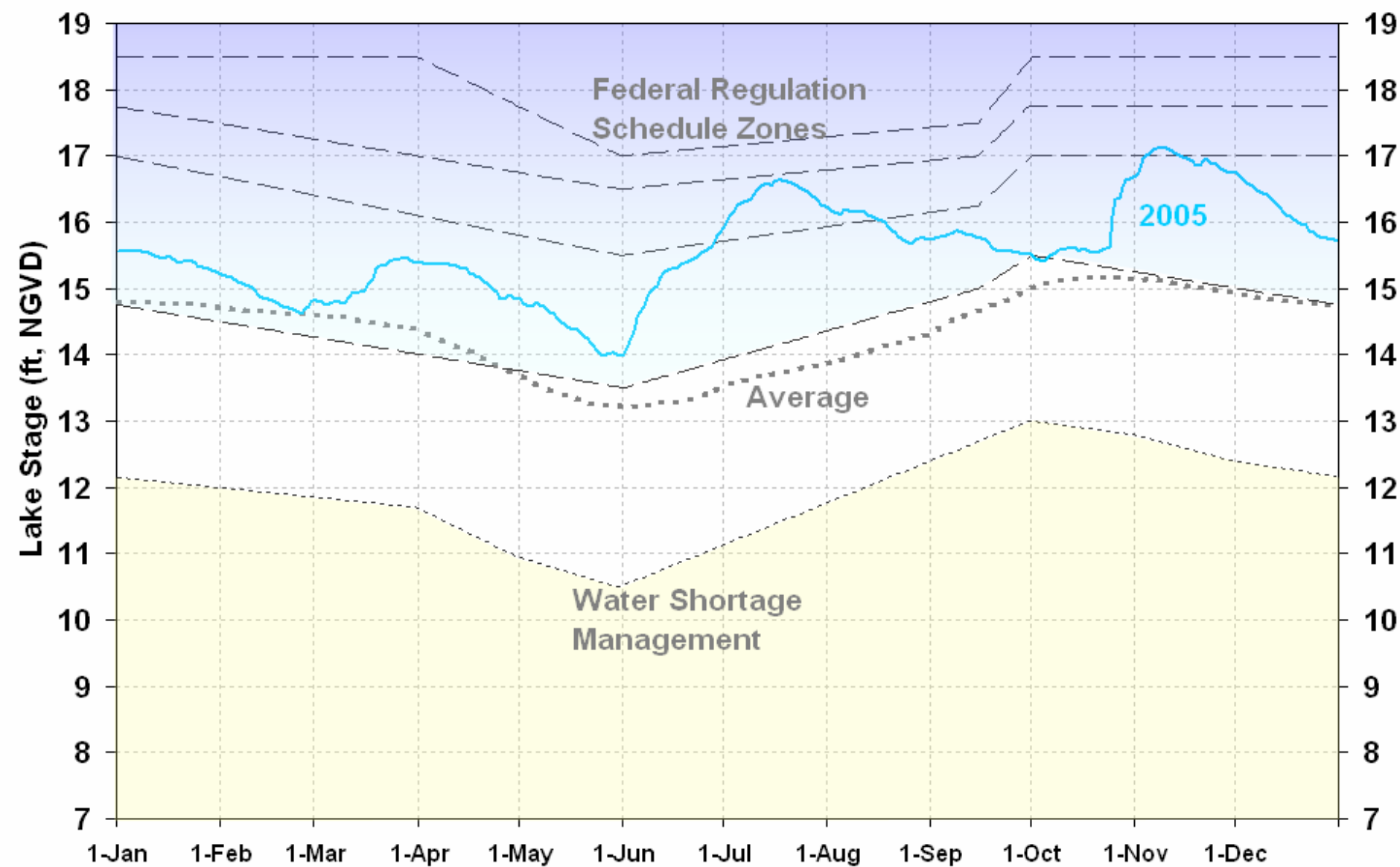
- - - Average(1965-2005)



Lake Okeechobee Historical Stage Hydrograph Comparison

- - - Average(1965-2005)

— 2005

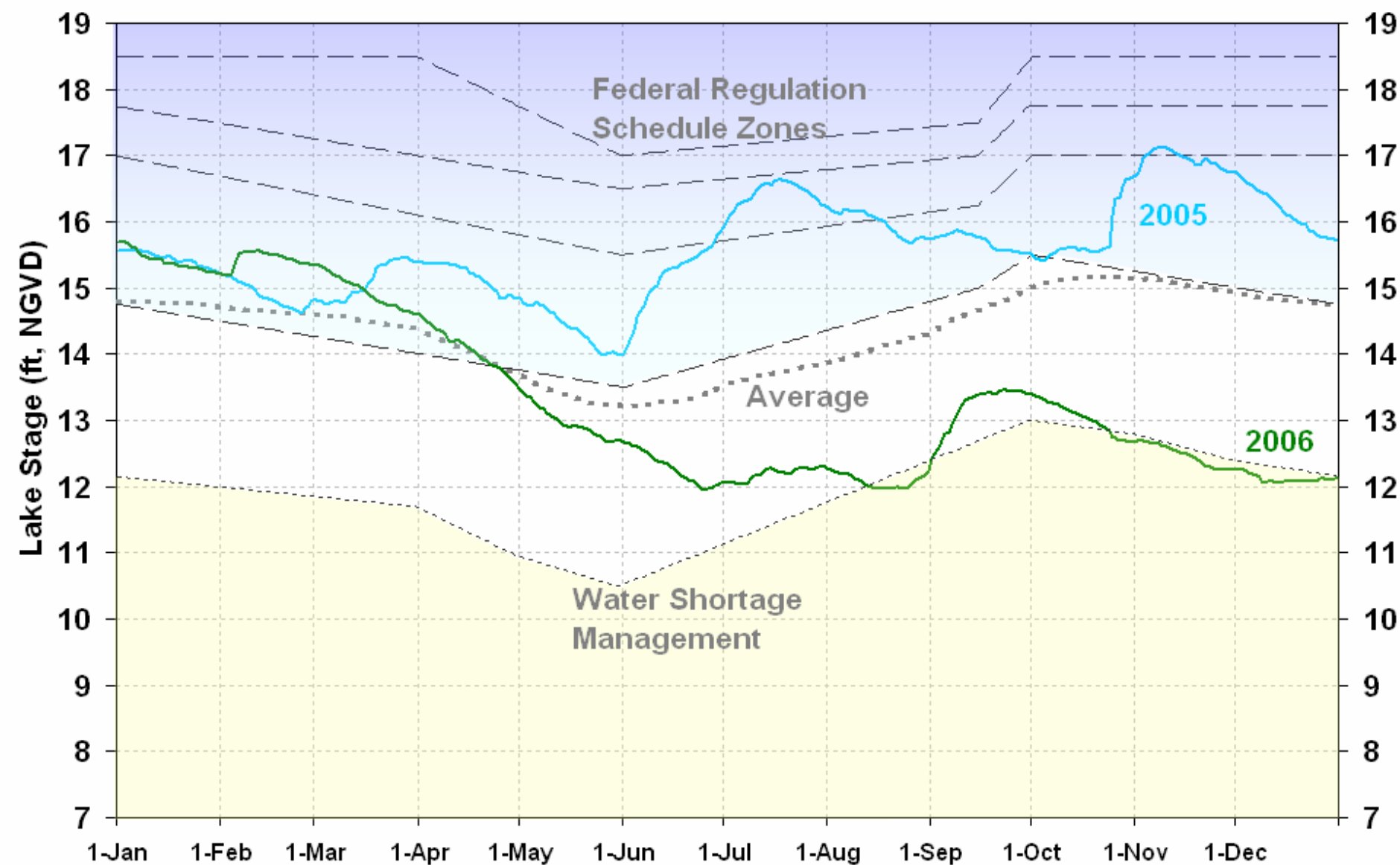


Lake Okeechobee Historical Stage Hydrograph Comparison

- - - Average(1965-2005)

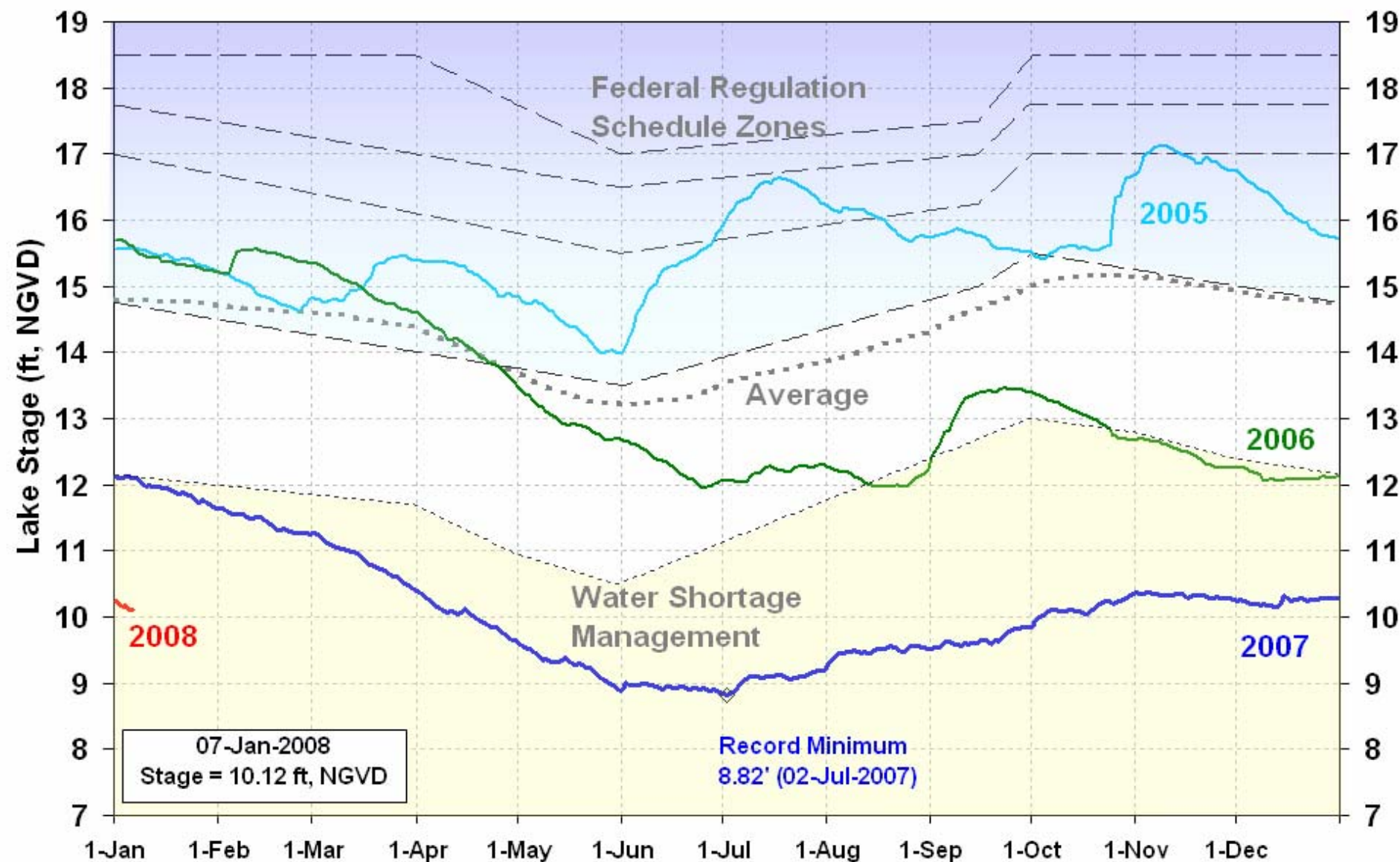
— 2005

— 2006

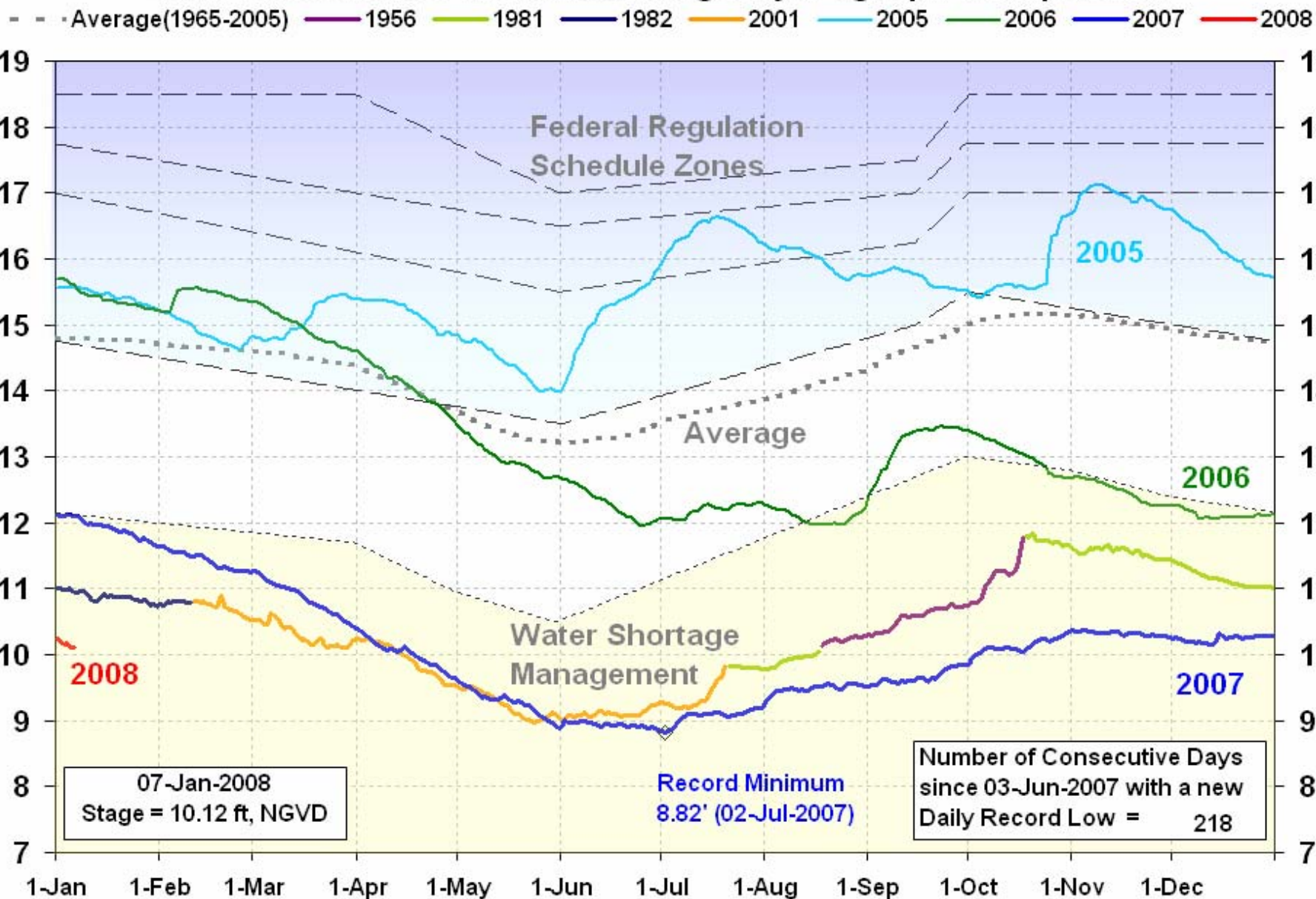


Lake Okeechobee Historical Stage Hydrograph Comparison

- - - Average(1965-2005) 2005 2006 2007 2008



Lake Okeechobee Historical Stage Hydrograph Comparison

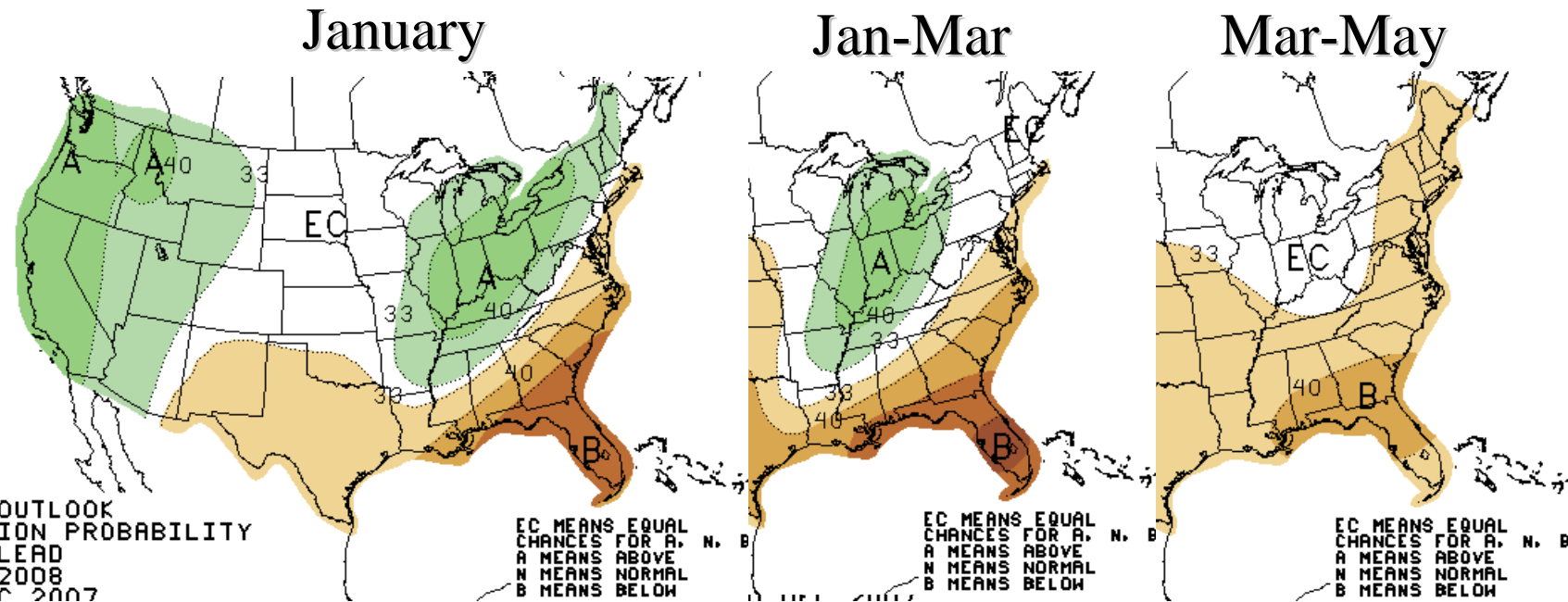


How will Lake Okeechobee stages behave during 2007-08?

- Depends on rainfall
- Projections provided monthly by SFWMD Hydrologic and Environmental Systems Modeling (HESM) Department
http://www.sfwmd.gov/org/pld/hsm/reg_app/opln/PA/wmm_upa_05012007.html
- Position Analysis
 - Each year starts with current hydrologic conditions
 - 41 1-yr simulations of system response to historical rainfall conditions
 - Statistical summaries used to provide projections

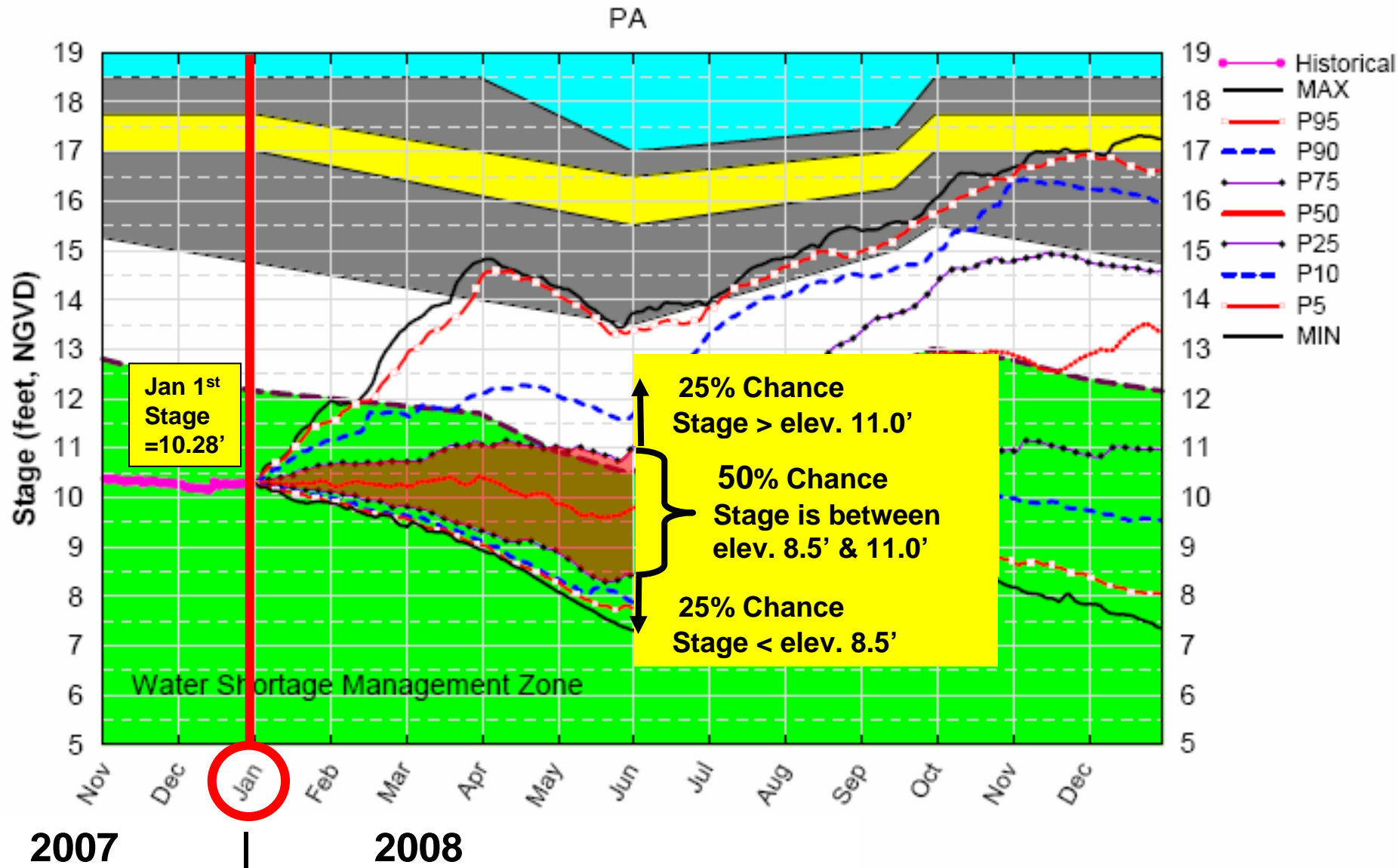
U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)



The CPC January outlook is for an increased chance of below-normal rainfall. The 2007-2008 dry season has an increased chance of below-normal rainfall due to La Niña conditions which are predicted by many climate models to persist.

Lake Okeechobee SFWMM January 2008 Position Analysis

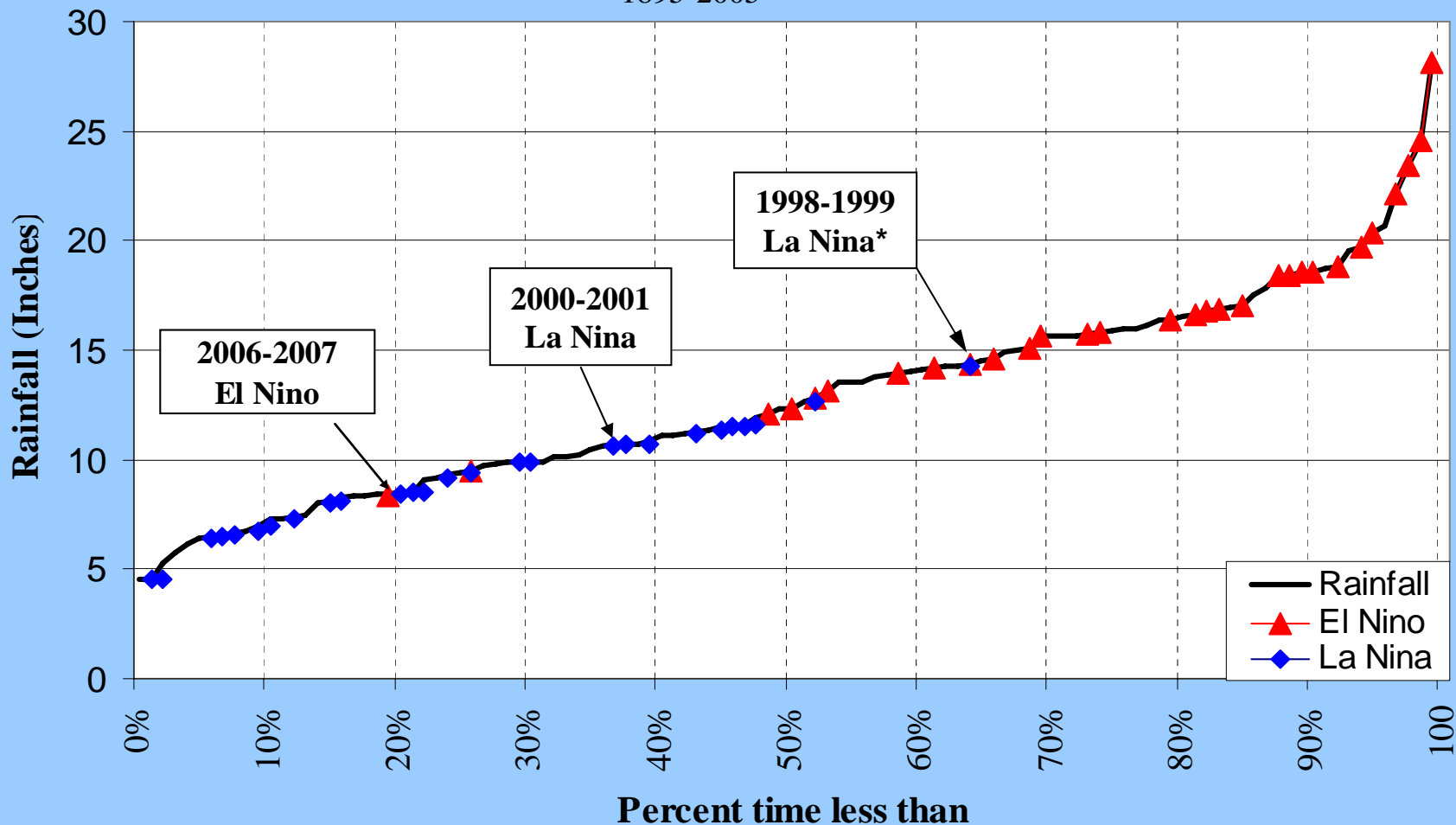


(See assumptions @ http://www.sfwmd.gov/org/pld/hsm/sfwmm_pa.html)

Historical SFWMD Dry Season Rainfall

(November - April)

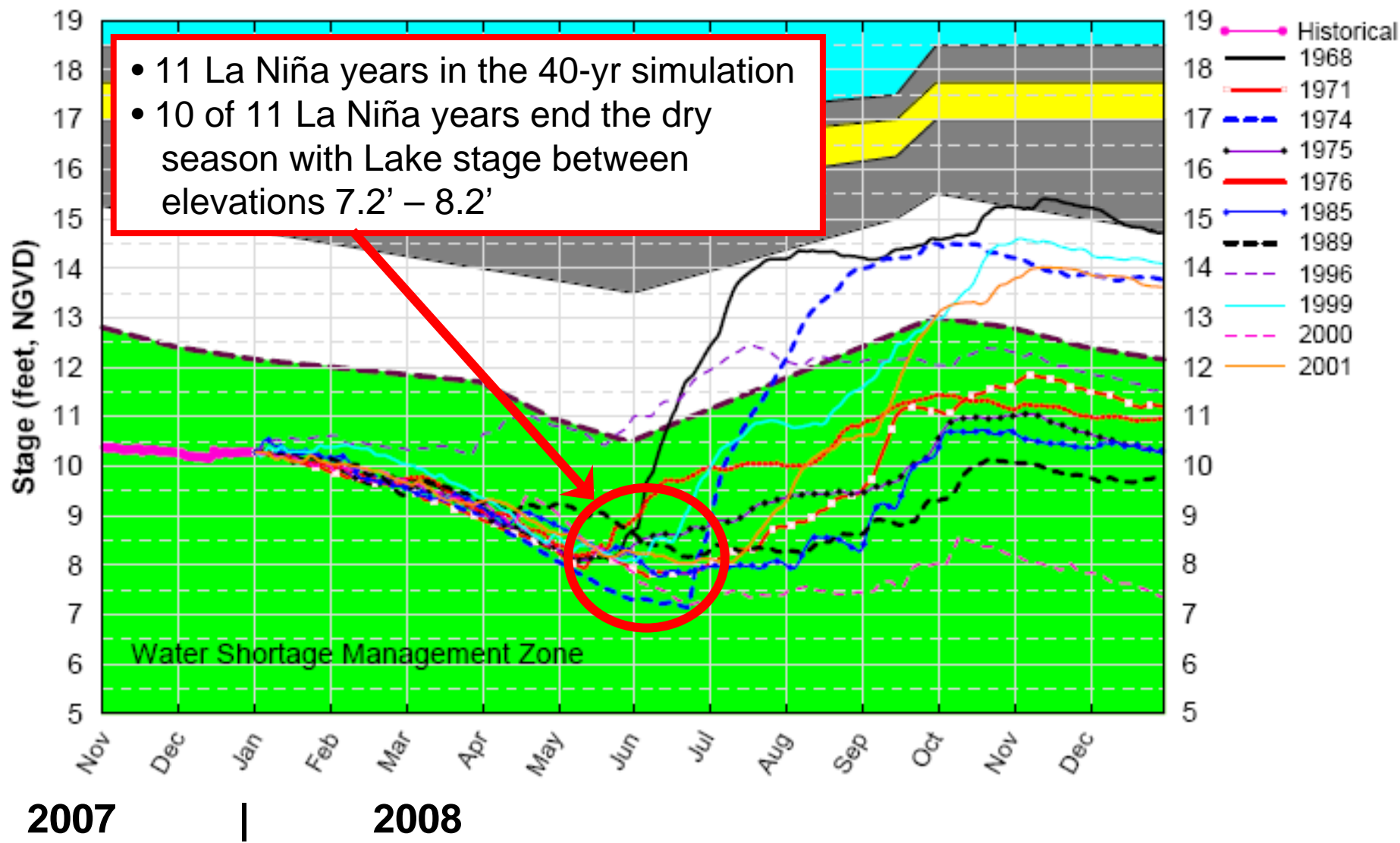
1895-2005



* 25 of the 27 La Niña years experienced rainfall less than the median

Lake Okeechobee SFWMM January 2008 Position Analysis

All La Nina Years Plot PA



(See assumptions @ http://www.sfwmd.gov/org/pld/hsm/sfwmm_pa.html)

Questions?

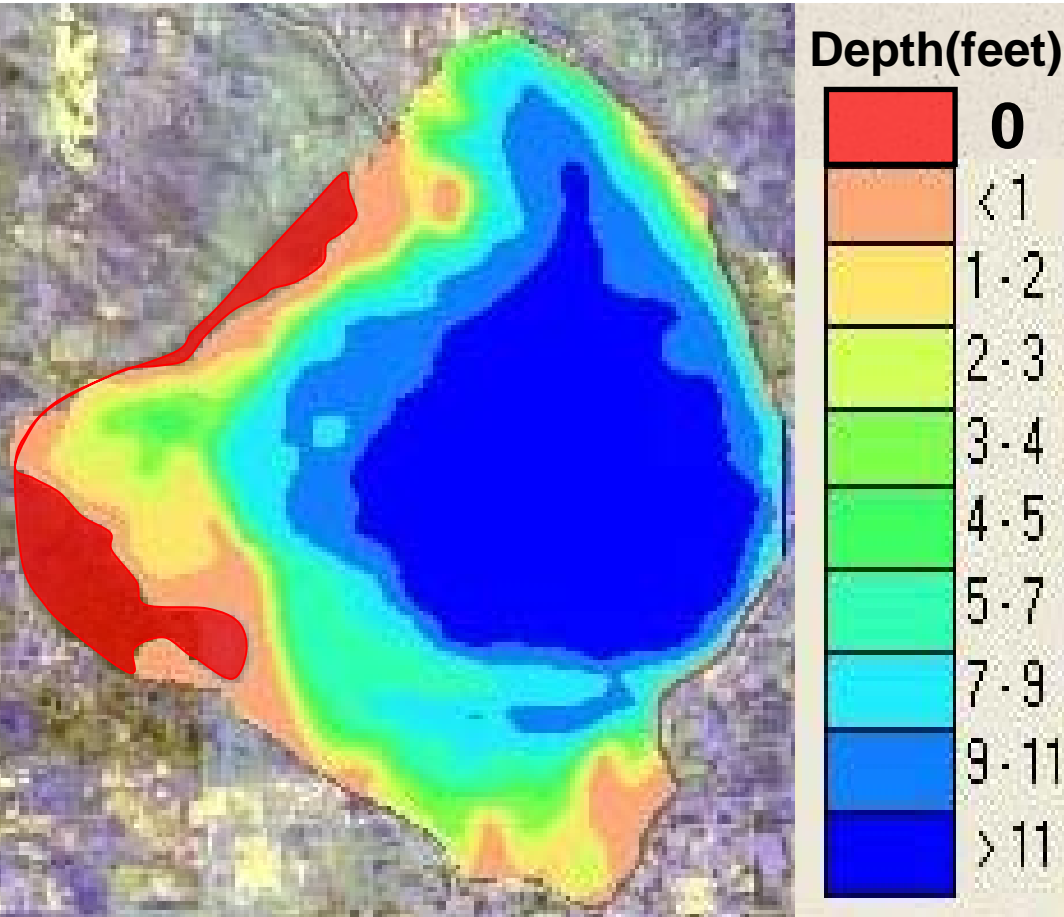


Photo: Pat Lynch - December 2007 Lake Hatchineha and Lake Cypress Area

Lake Okeechobee Water Surface Area & Depths

Average end of dry season (May)
Lake Stage = 13.0 ft, NGVD

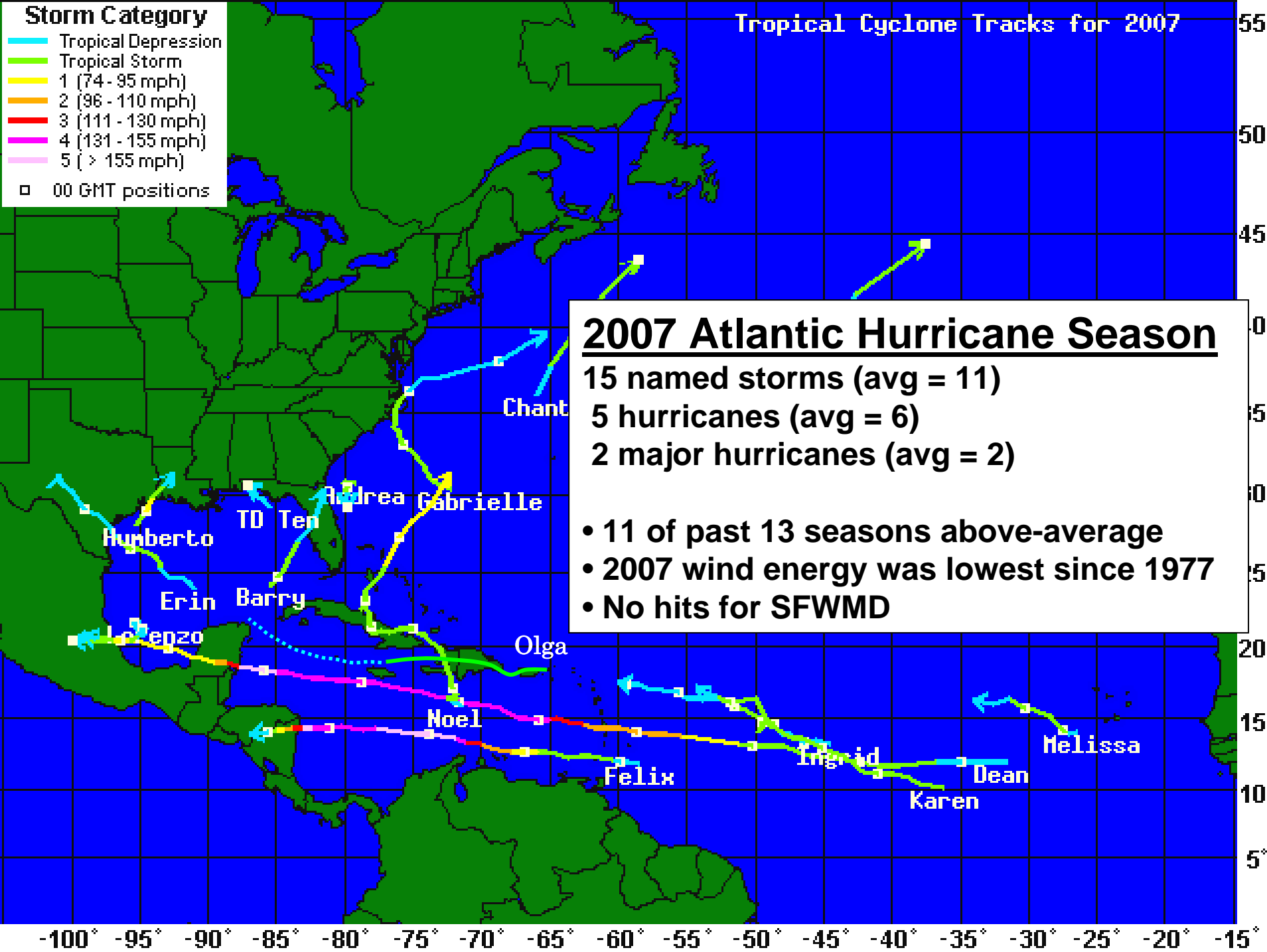
Possible end of 2008 dry season
Lake Stage = 7.0 ft, NGVD



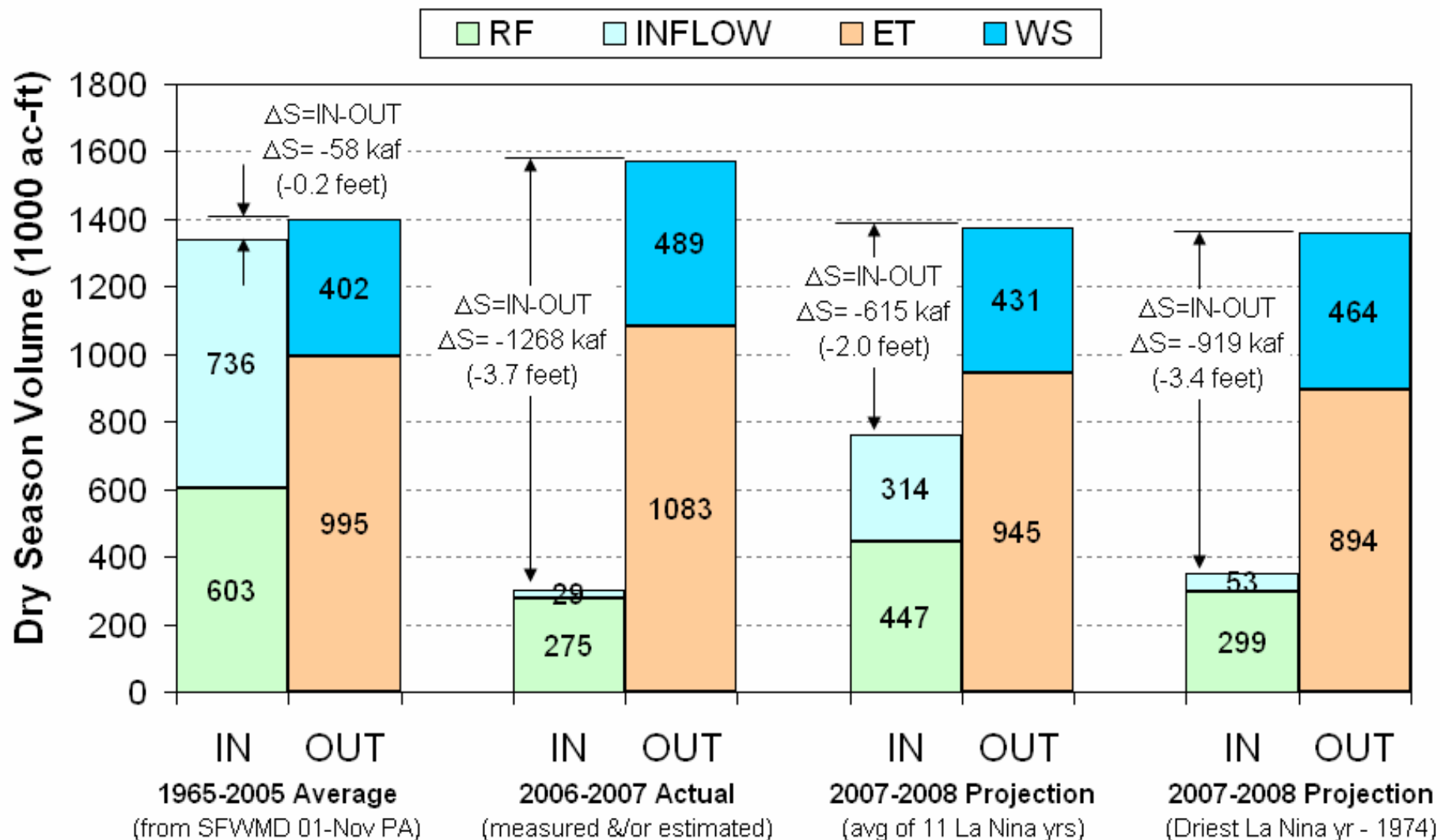
Lake Surface Area
652 sq.miles (90%)



Lake Surface Area
444 sq.miles (60%)



Lake Okeechobee Water Budget Comparison (Dry Season: Nov-May)

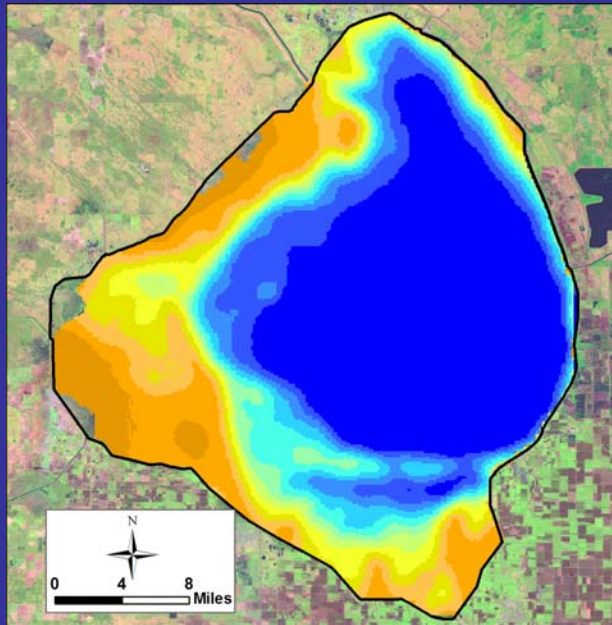


Lake Okeechobee Water Depth Comparison

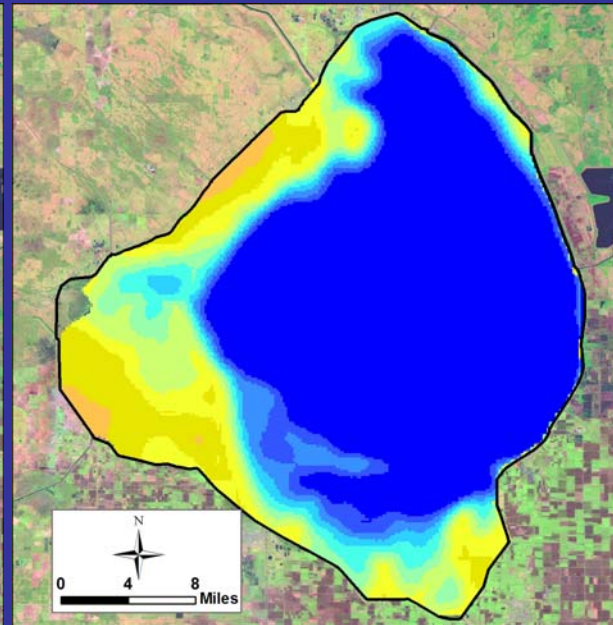
<http://spatial1.sfwmd.gov/losac/sfwmd.asp>

Elevation
14.3 ft, NGVD
Long-term
Average
(1965-2005)

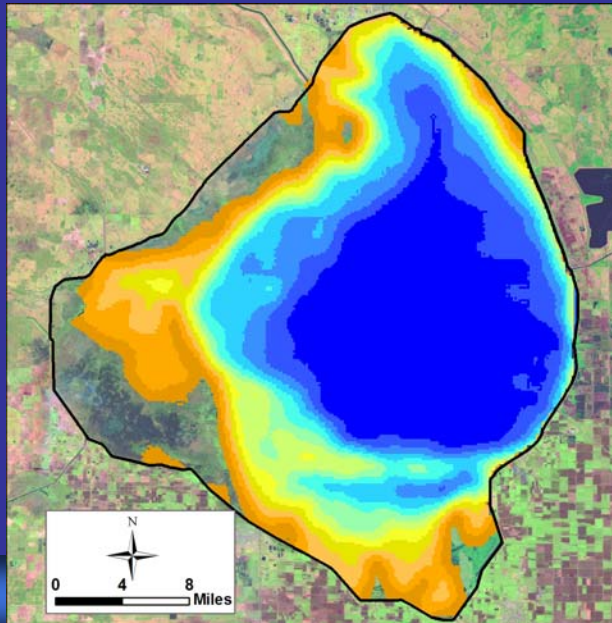
Water Depth



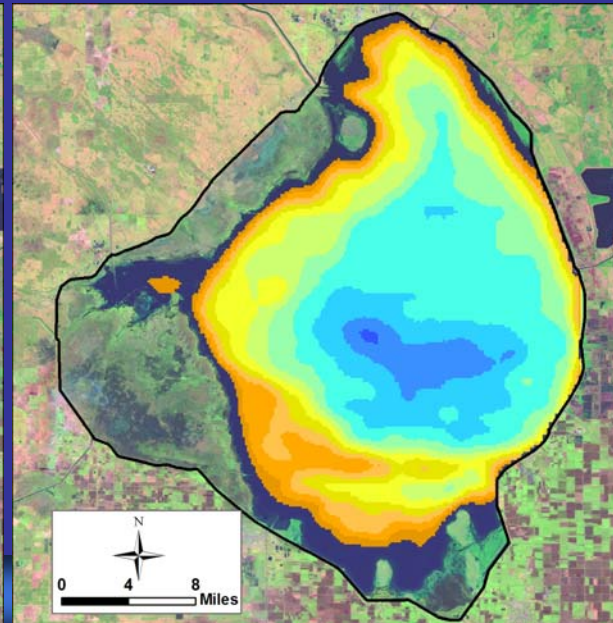
Elevation
17.0 ft, NGVD
Hurricane
Wilma
Nov-2005



Elevation
12.7 ft, NGVD
Start of '07
dry season
01-Nov-2007



Elevation
8.82 ft, NGVD
Record Low
02-July-2007





2007 Atlantic Hurricane Season Outlook

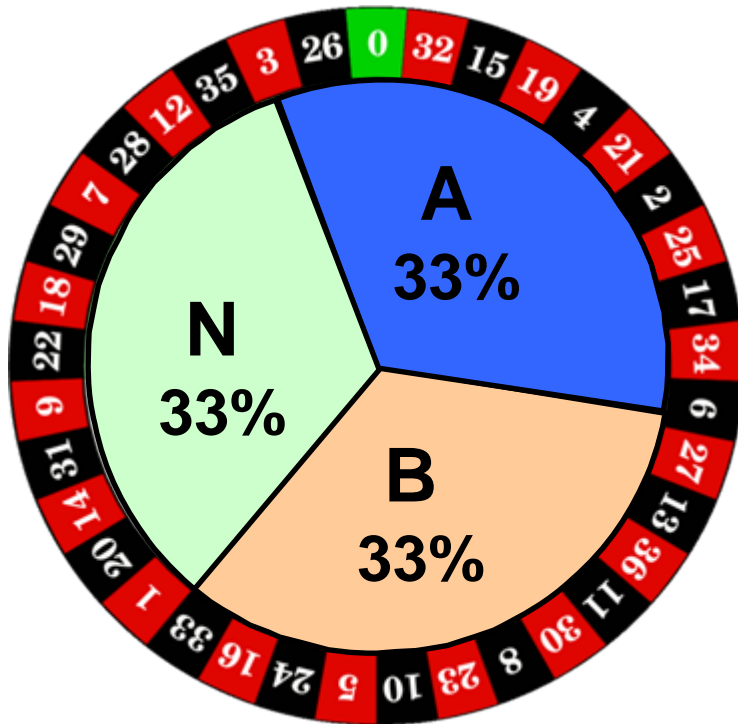
	August	May	Normal	Actual
Named Storms:	13-16	13-17	11	15
Hurricanes:	7-9	7-10	6	5
Major Hurricanes:	3-5	3-5	2	2

*2007 Outlook
Probability*

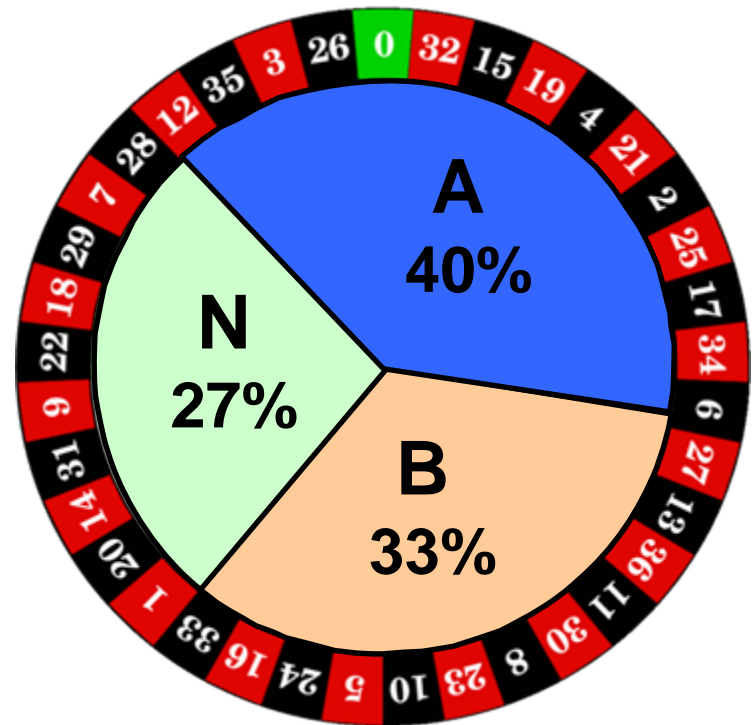


Climate Outlook Probabilities

How to Interpret the CPC Precipitation Outlook



EC = Equal Chances of A, N, B

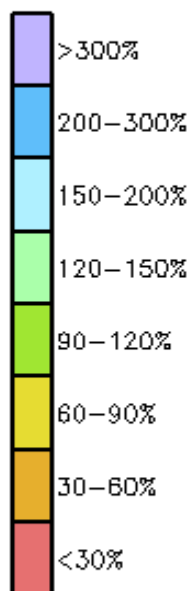


Increased Chance of Above-Normal

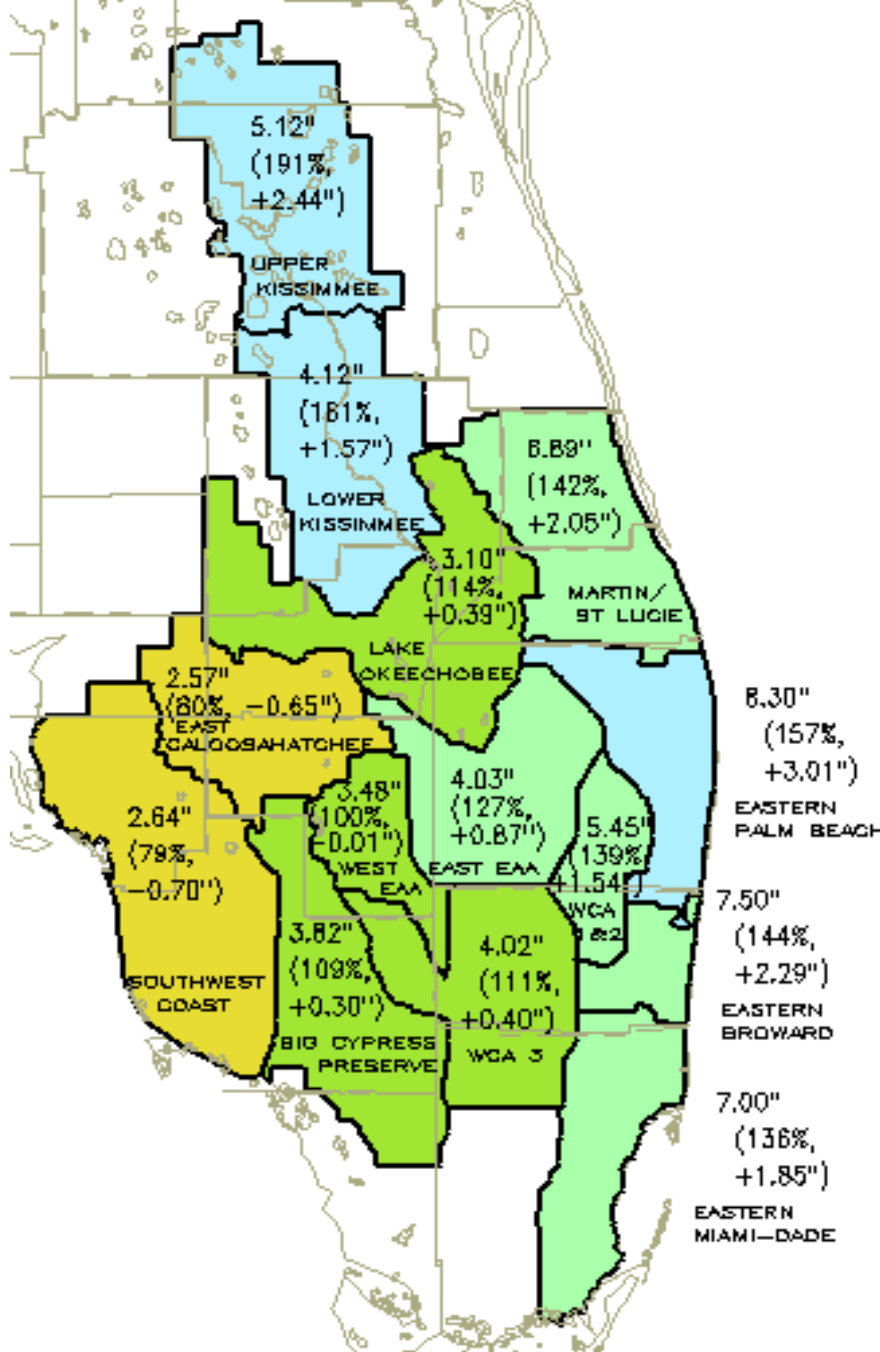
SFWMD 2007 October Rainfall Oct 2nd – Oct 30th

**DISTRICT-WIDE:
4.52" (129%, +1.0")**

**Average October
= 3.76"**



Measured
(% of Avg.
Diff From Avg)



*Above-Average October Rain
in all basins except:*

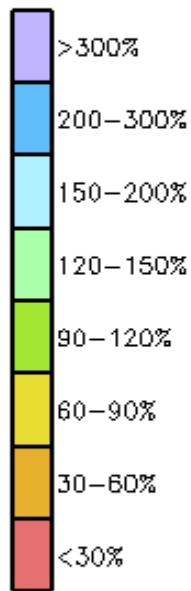
- Caloosahatchee
- Southwest Coast

SFWMD 2007 Wet Season Rainfall

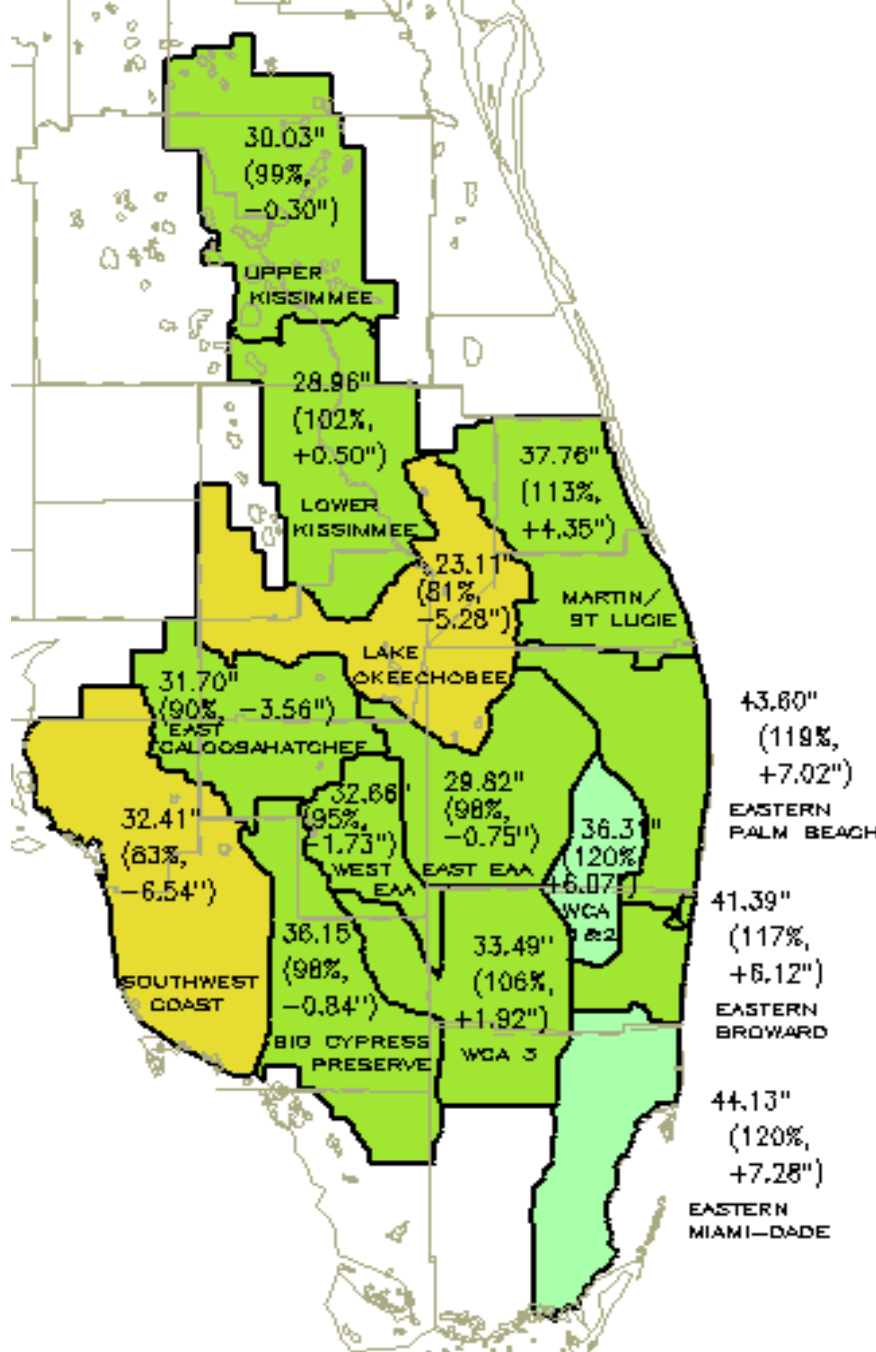
02-Jun to 30-Oct

DISTRICT-WIDE:
33.23" (101%, +0.26")

Average Wet Season
= 33.2"



Measured
(% of Avg.
Diff From Avg)



- *Lake O. & Southwest Coast 5"-7" below-average*
- *Year-to-date 6.4" deficit District-wide*
- *Need ~50% of avg rain for Nov-Dec (4.7") to avoid breaking all-time record low 2-yr rainfall (1955-56: 84")*

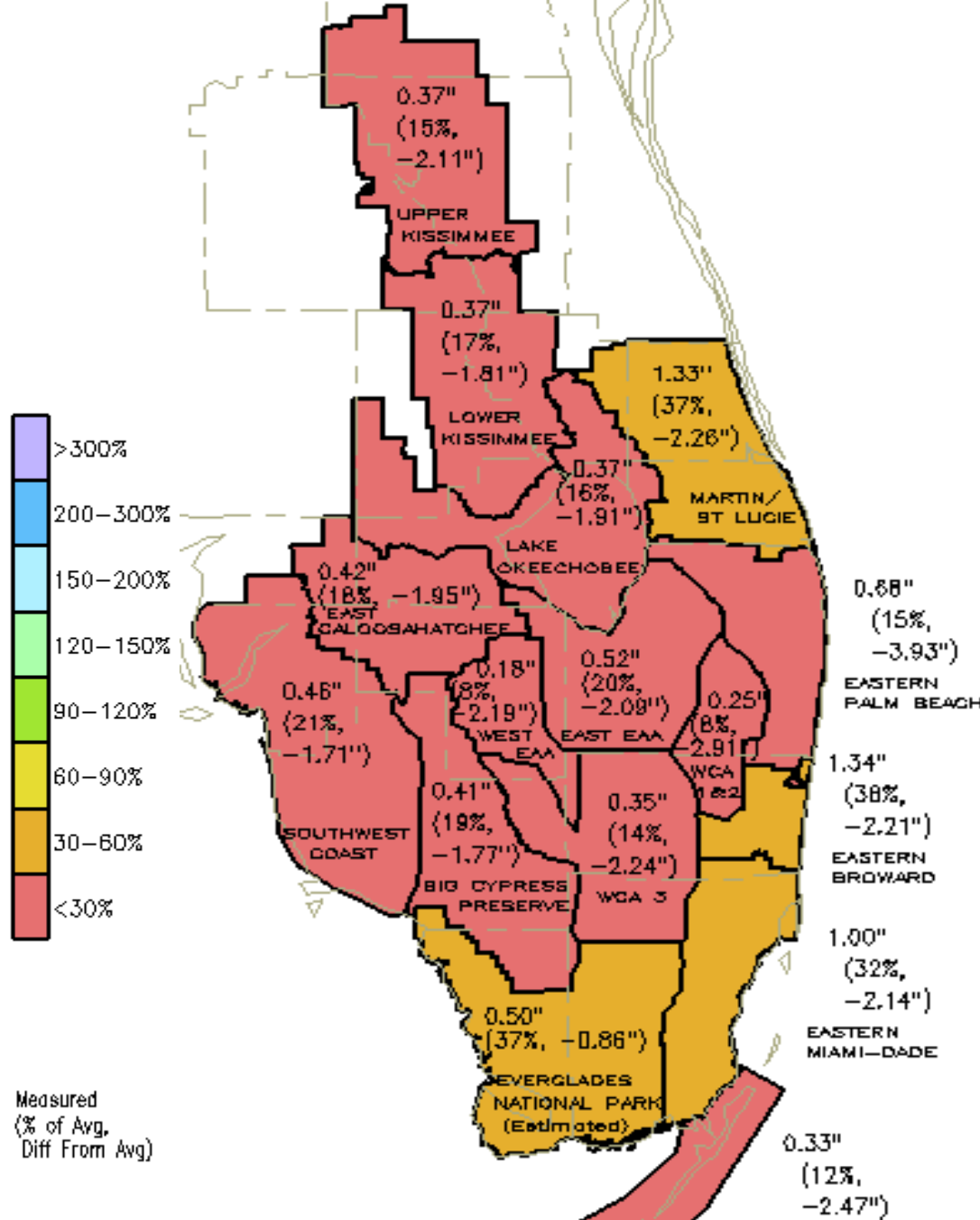
SFWMD 2007 November Rainfall

Nov 2nd – Dec 1st

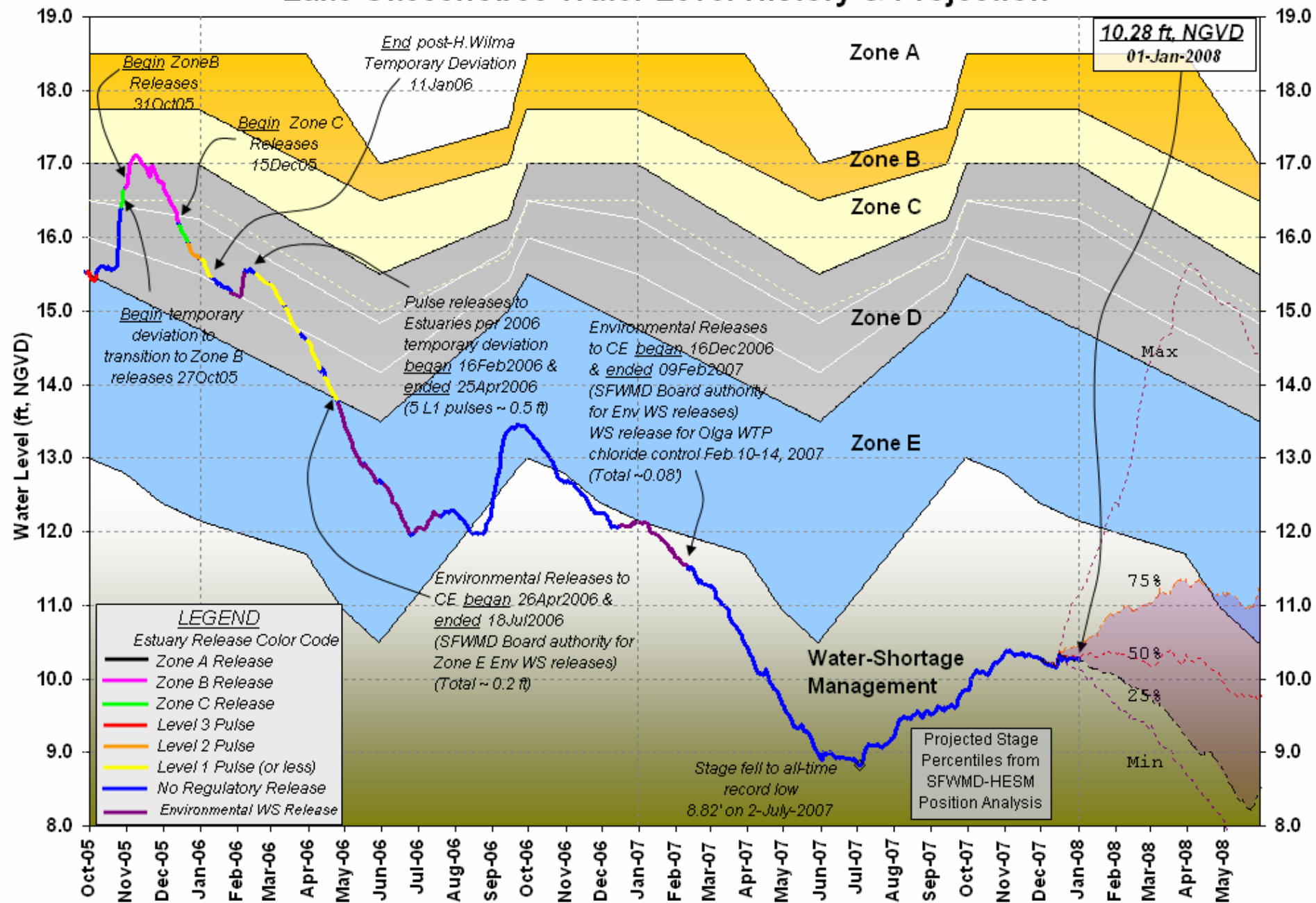
DISTRICT-WIDE:
0.54" (20%, -2.12")

Average November
= 2.66"

- *Below-average November rainfall in all basins*
- *November 2007 was the 5th driest November on record*
- *Poor start for the 2007-2008 Dry Season*



Lake Okeechobee Water Level History & Projection



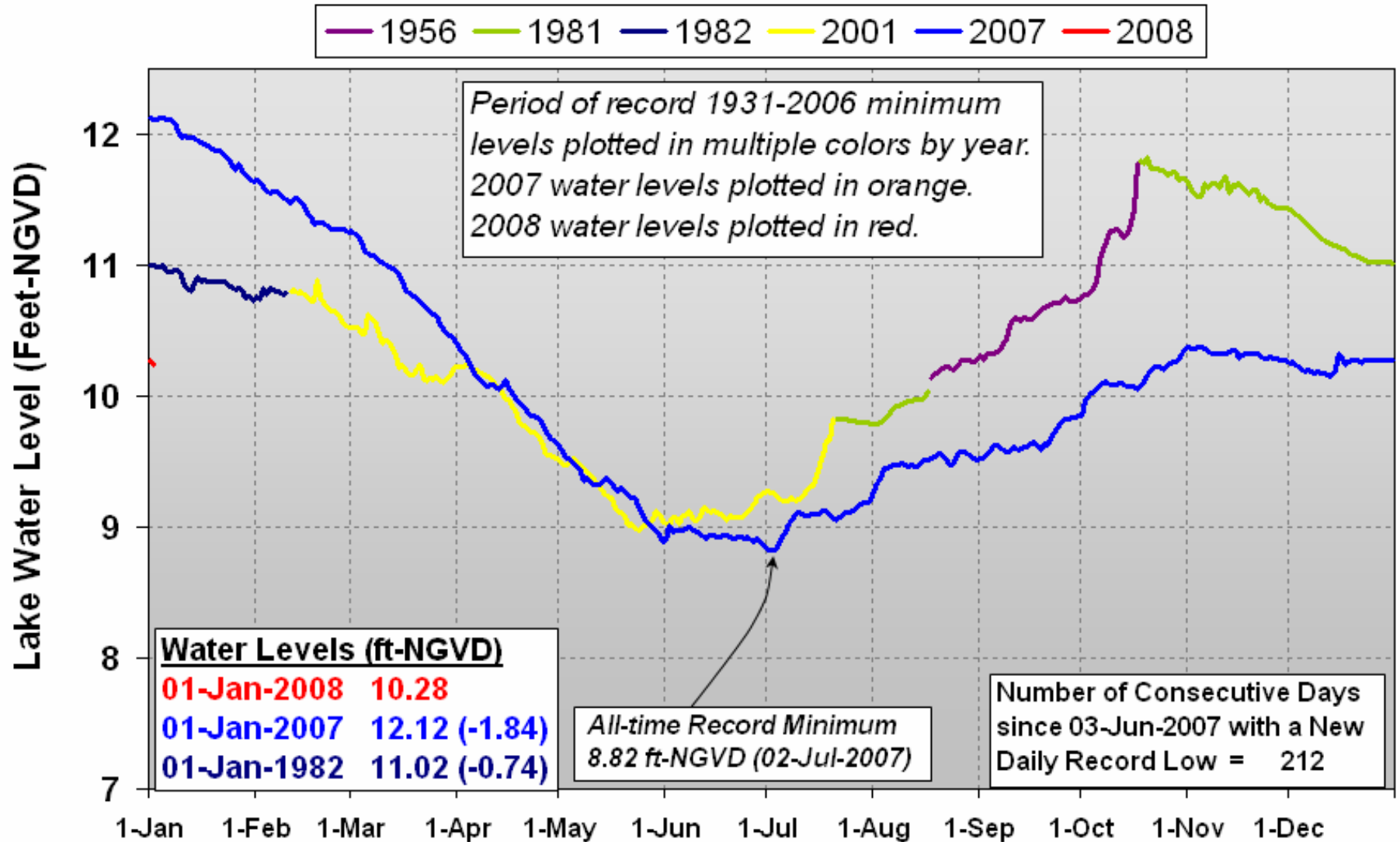
SFWMD AVERAGE RAINFALL (30 YEAR: 1976-2005)

http://www.sfwmd.gov/org/omd/ops/weather/30yr_rain.html

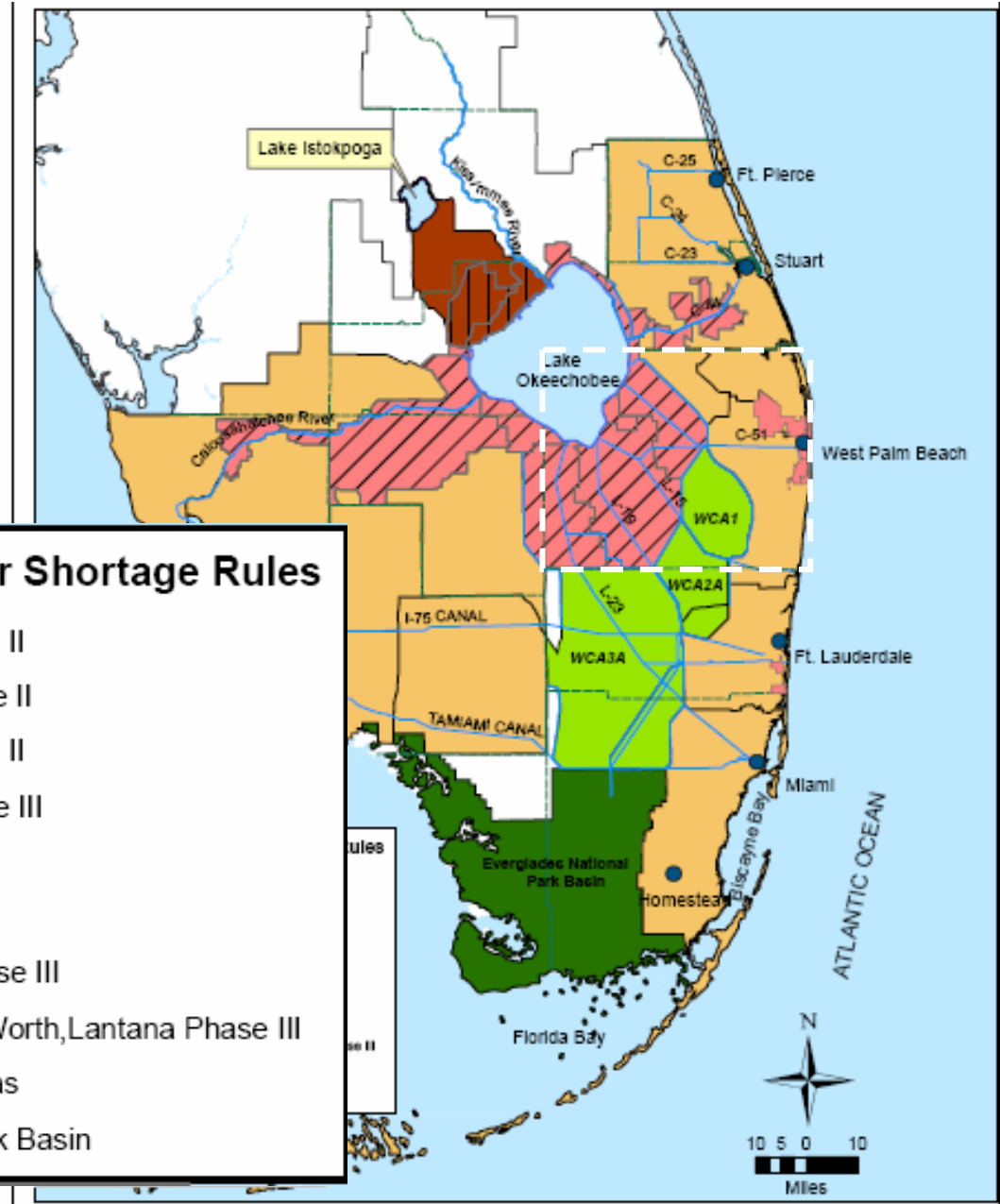
NORMAL	Upper Kiss	Lower Kiss	Lake O	East EAA	West EAA	Conserv _1_2	Conserv Area_3	Martin/ St. Lucie	Palm Beach	Broward	Dade	East Caloos	BCP	SW Coast	District
JAN	2.38	1.86	2.12	2.19	2.17	2.20	1.91	2.48	3.29	2.34	1.97	2.20	2.21	2.43	2.23
FEB	2.44	2.18	2.06	1.92	1.97	2.34	1.98	2.51	2.82	2.47	2.04	2.04	2.04	2.28	2.19
MAR	3.35	2.98	2.93	2.80	2.85	2.68	2.56	3.80	3.79	2.78	2.66	2.97	2.68	2.86	3.01
APR	2.33	2.18	2.22	2.35	2.42	2.56	2.58	2.84	3.24	3.32	3.18	2.39	2.39	2.40	2.50
MAY	3.55	3.78	3.66	4.30	4.35	4.60	4.42	4.23	5.12	5.35	5.30	3.88	4.21	4.04	4.19
JUN	7.41	7.07	6.77	7.21	8.44	7.28	8.22	6.69	8.10	8.91	8.94	8.85	9.49	9.72	8.03
JUL	6.88	6.35	5.96	6.38	7.34	6.08	6.48	6.50	6.38	6.04	6.13	7.58	8.09	8.76	6.83
AUG	7.21	6.48	6.66	7.09	8.10	6.60	7.12	7.58	7.74	7.41	8.29	8.30	8.35	8.90	7.54
SEP	6.15	6.01	6.29	6.73	7.02	6.37	6.13	7.80	9.07	7.70	8.34	7.31	7.54	8.23	7.05
OCT	2.86	2.73	2.90	3.38	3.73	4.18	3.87	5.17	5.66	5.57	5.50	3.44	3.76	3.57	3.76
NOV	2.48	2.18	2.28	2.61	2.37	3.16	2.59	3.59	4.61	3.55	3.14	2.37	2.18	2.17	2.66
DEC	2.65	1.83	1.82	1.86	1.73	1.92	1.65	2.32	2.96	2.21	1.96	1.81	1.81	1.84	2.01
YEAR	49.69	45.63	45.67	48.82	52.49	49.97	49.51	55.51	62.78	57.65	57.45	53.14	54.75	57.20	52.00

Lake Okeechobee











Period of Record 1931-2006 Minimum Water Levels



Water Restriction Phases Imposed by the SFWMD (last revision 10-July-2007)



Areas Affected by Water Shortage Rules

-  Upper East Coast Phase II
-  Lower West Coast Phase II
-  Lower East Coast Phase II
-  WPB Service Area Phase III
-  LOSA Phase III
-  Indian Prairie Phase III
-  South Indian Prairie Phase III
-  Dania, Hallandale, Lake Worth, Lantana Phase III
-  Water Conservation Areas
-  Everglades National Park Basin